DOCUMENT RESUME

ED 144 617 IR 005 281

AUTHOR	Woolls, Blanche; And Others
TITLE	Evaluation Techniques for School Library/Media Programs. A Work Shop Outline.
INSTITUTION	Pittsburgh Univ., Pa. Graduate School of Library and Information Sciences.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
PUB DATE	77
NOTE	96p.
EDRS PRICE	MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS	*Educational Accountability; *Evaluation Methods; *Library Programs; Measurement Instruments; Media Specialists; *Program Evaluation; *School Libraries; Statistical Analysis; *Workshops

ABSTRACT

This report of an Institute in Evaluation Techniques in School Library/Media Programs is presented in outline form to serve as a format for other training and inservice sessions in evaluation techniques. Basic information is given in the narrative with indication of related discussion questions and activities for participants. A discussion of the importance of evaluation is followed by sections on what information to collect, existing evaluation and measurement instruments with analysis of six specific instruments, other measures of quantitative program aspects, and a description of Liesener's costing methods. Other measures considered for evaluating qualitative areas of the program are: (1) best professional judgement; (2) questionnaires; (3) interviews; (4) observations; (5) scales; and (6) ranking. The basic techniques of statistical analysis are described, including errors in observation making, computer use in analysis, manual tabulation and computation of statistics, drawing conclusions, and the Purdue Self Evaluation System for School Media Centers (PSES). Sample evaluation forms and programs, bibliography, and lists of participants, advisory committee, and staff are appended. (KP)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED144617

EVALUATION TECHNIQUES FOR SCHOOL LIBRARY/MEDIA PROGRAMS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A WORK SHOP OUTLINE

BY

BLANCHE WOOLLS

DAVID LOERTSCHER

DONALD SHIREY

BEST COPY AVAILABLE

GRADUATE SCHOOL OF LIBRARY AND INFORMATION SCIENCES

UNIVERSITY OF PITTSBURGH

1977

This publication was prepared pursuant to a grant from the United States Office of Education, Department of Health, Education and Welfare. The material included herein does not necessarily reflect the position or policy of the United States Office of Education, and no official endorsement by the United States Office of Education should be inferred.

IR005381

TABLE OF CONTENTS

PREFACE iii

INTRODUCTION 1

IMPORTANCE OF EVALUATION 3

What To Collect 4

Existing Evaluation and Measurement Instruments 5

Instruments Analyzed 6

Other Measures of Quantitative Program Aspects 8

Liesener's Technique--Quantitative Sections 13

OTHER MEASURES LEADING TO MORE QUALITATIVE AREAS OF PROGRAM 17

Best Professional Judgment 17

Questionnaires 19

Interviews 20

Observation 23

Scales 24

Ranking 26

STATISTICAL ANALYSIS 27

Errors in Making Observations 29

Manual Tabulation and Computation of Statistics 34

Drawing Conclusions (Generalizability) 35

Liesener Reconsidered 35

PSES as an Assessment Instrument 35

CONCLUDING REMARKS ON STATISTICAL PROCEDURES 36

Summary Comments on Sampling and Generalizability 38

APPENDIX A - EVALUATION FORMS 40

APPENDIX B - SAMPLE PROGRAM 61

APPENDIX C - BIBLIOGRAPHY 70

APPENDIX D - INSTITUTE PARTICIPANTS 81

APPENDIX E - ADVISORY COMMITTEE AND INSTITUTE STAFF 84

PREFACE

"There has been a lack of hard data about the productivity of our schools, and their evaluation has thus been more in terms of what goes into the process of education rather than it's outcomes. This lack of simple accountability hampers efforts to reform public education at all levels. The need to develop and support the procedures to permit accountability in public education is one of our most important tasks."

James B. Allen
U. S. Commissioner of Education
1969 - 1972

--Format and Production by Theresa Benedek--

INTRODUCTION

A recent concern in education has been accountability. With reduced funding and reduced school populations, programs are being assessed for their value to the total school system, and any program which is not rated highly is phased out. Some programs may be of great value to the school program, but the administrators and teachers who have been involved in these programs have been unable to demonstrate the value of the program to the education of students. They may have applied an incorrect evaluation technique or may have been unaware of techniques for evaluation which would assess the value of the program to the school system. Many school librarian/media specialists may be in the group of teachers who are unaware of techniques for evaluation for, traditionally, evaluation for the library/media program has been a circulation count or a record of number of reference questions answered.

For many years school librarians provided books for the students and teachers within their school buildings. Although in the early sixties more and more librarians added forms of information other than books to their collections and many adopted a new title, media specialist, the emphasis remained on the circulation of materials to students and teachers. Today's librarian/media specialist must provide a program

> designed to assist learners to grow in their ability to find, generate, evaluate, and apply information that helps them to function effectively as individuals and to participate fully in society. (Media Programs, p. 4)

Furthermore, the librarian/media specialist must be able to apply evaluation techniques to the program to determine program quality which "is judged by its effectiveness in achieving program purposes." (Ibid.)

Not only the stress on accountability but also the more recent evaluation requirements of PL 93-380 (Title IVB and C) have helped some librarian/media specialists recognize that techniques for the evaluation of programs and services in the school library/media center have been, at best, inadequate. While personnel in these library/media centers may have been aware of and have used standards or guidelines developed by state departments of education or national library and media associations as well as evaluation instruments designed by regional accrediting agencies, traditionally, such persons have not been aware of nor have made extensive use of other evaluation techniques. An Institute in Evaluation Techniques for School Library/Media Programs, sponsored by the U.S. Office of Education in cooperation with the Pennsylvania School Librarians Association was held in July, 1976 at the Graduate School of Library and Information Sciences, University of Pittsburgh.

The goals of the institute were

to apply an existing evaluation design to a specific situation

to adapt an existing evaluation design to a specific situation

to develop an evaluation instrument to test a given research problem based upon a statistical design

to translate data into machine readable format and analyze with a prepackaged computer program

to critique research designs

to design a research project

School librarian/media specialists were given an opportunity to learn evaluation techniques and to devise evaluation strategies and instruments for existing and future programs and services. Participants were

to become aware of areas of school media programs and services that could be evaluated both quantitatively and qualitatively

to be introduced to simple research designs and to the preparation of data for machine readable format as well as computer packages that handle data

to be given the opportunity to develop a research design

Data were analyzed via a computer terminal, and a report of the findings was discussed.

When the institute was funded, the suggestion was made that this training method could serve as a model for similar sessions and that an outline of the activities of this institute and a presentation of the discussion questions could serve as a format for others who need to plan training and inservice sessions in evaluation techniques.

While the institute sessions were recorded, outline form rather than complete text was chosen for this report. It was determined that conceptualization in outline form would be more easily replicated than attempting to follow the complete text.

The format of this report is as follows:

1. Basic information is given in the narrative.
2. Discussion questions for participants are enclosed in boxes
3. Activities to be carried out by the participants are enclosed in **********

IMPORTANCE OF EVALUATION

Evaluation is the only rational approach to educational assessment and decision-making. Evaluation will provide a means to make choices. If what is planned to be an improvement is attempted, results of this "improvement" must be verified. Educational institutions have long been eager to adopt innovation, which are usually untested or inadequately tested and yet eagerly attempted. As a result, we should not be surprised to find that in 1976 the battle cry is "Back to the Basics."

The year 1976 is also in the era of accountability, the need for objective evaluation of education programs to determine cost effectiveness. The design of ESEA Title IV has mandated the school librarian/media specialists' effective evaluation of the school library/media program, plans for change and improvement which does or does not occur. New Title IV legislation requires the use of evaluation techniques to determine program needs before proposing the expenditure of Title IV funds for

> Congress is consolidating funds and stipulating local discretion in their use, has also required that evidence of the impact of these monies be demonstrated by the local education agency. . . . The development of goals, objectives and evaluation strategies for measuring impact of Part B funds thus becomes a necessary part of the application process. (Information and Instructions ESEA Title IV P.L. 93-380, Pennsylvania Department of Education [1975?] unpublished, mimeographed, p. 4.)

A. Jackson Stenner has defined evaluation as "the process of clarifying a set of information needs, and collecting, analyzing, and reporting information to alleviate those needs." (An Overview of Information Based Evaluation: A Design Procedure, Arlington, Va., Institute for Development of Educational Auditing, 1972, p. 4.) If evaluation is a "process" then it must be an ongoing, continuous activity. This process will require resources which implies expenditures. It may not be an expenditure which one sees as a fiscal item written into an accounting journal in the same way one would see the expenditure for purchase of testing materials for the guidance department's evaluation of students, but the activities involved in the evaluation process will take the time of teachers, students, administration, parents, as well as the librarian/media specialist. Time is an expense although no physical record may be made of cost of time.

One should not evaluate an activity once, and finding it to be successful continue the activity year after year assuming it is still successful. On the other hand, if the evaluation activity is not successful, these results should not be stored away or ignored, but must be discussed in an attempt to improve, modify, redesign and retest to see if modifications could bring about success of the activity. Thus evaluation can offset or alleviate problems encountered when programs, both established and innovative, appear through testing to do little or nothing to further educational achievement.

In today's world, needs must be clarified with valid data. No longer can the librarian/media specialist exist with the assumed justification that the library/media center is a good place simply because it's always been a good place and that's true because it says so in the literature--particularly library literature. Program assessment must be designed to clarify program needs.

The first step in evaluation is deciding what to collect.

WHAT TO COLLECT

An overabundance of information exists which might be collected. The researcher must consider three influences upon data collection. The first consideration is the amount of information to be collected. For instance, what can economically be collected? The opinions on several subjects of every student and teacher in a 3,500 student high school might be interesting and informative, but analyzing that quantity of data could be impractical. Also, if one queries every student and teacher each time one wishes to analyze a change in service, the public relations image of the library/media center will quickly become negative. Therefore, decisions must be made about what items are to be collected. In other words you must decide what you need to know and how you plan to use it. This involves an analysis of what the problem is. It further involves how you plan to test it.

Researchers must also decide the items to be collected based upon the methods planned for analyzing the data. Statisticians suggest that the method of analyzing be chosen before data is collected, for several reasons. Among these are

1. The method of analyzing should dictate the type of data collected, the amount of data collected and the manner by which the data is collected.
2. The method of analyzing will determine what the researcher can say about his results.
3. The method of collecting and analyzing will determine if the results are generalizable to other populations.

A last consideration on what to collect is the person to whom you are to report. Evaluations are meaningless unless they are communicated to the appropriate administrator. One must realize that the recipient of the information may choose to interpret data to fit preconceived ideas. On the other hand, the person receiving the data may not be interested in the information collected and would have preferred another type of study.

EXISTING EVALUATION AND MEASUREMENT INSTRUMENTS

A number of existing evaluation and measurement instruments have been published nationally by associations and individuals. Workshop participants should have an opportunity to scan what is available but more importantly should be able to

Understand the type of data required by the instrument.

Realize the amount of effort needed to collect the required data.

Assess what the instrument does measure.

Assess what the instrument does not measure.

Administer the "so what" test, i. e., what do you do as a result of the experience.

Also, in evaluating evaluation, one applies four criteria: validity, reliability, timeliness and credibility. Validity is determined if the information retrieved is what the decision-maker needs. Reliability is established if the information can be reproduced. Timeliness is determined if the information reaches all decision-makers who need it, when they need it, and credibility is judged if the information is trusted by the decision-maker and by those he must serve.

Participants should also understand the difference between formative and summative evaluation and should be able to classify and evaluation instrument or technique as one of the two categories or a combination of methods. More importantly, participants should be able to understand how summative instruments might be adapted into a more formative evaluation process.

Formative evaluation is the continual collection, assessment, and reporting of appropriate information to the person in charge of decision-making. This information should assist in the establishment of values or priorities among alternative courses of action DURING THE LIFE OF THE PROGRAM rather than after the program is completed. Judicious changes in programs may change a failing plan into a successful program.

Summative evaluation is used to determine the effectiveness of the project or the program AFTER it has run its full cycle. Summative evaluation which is conducted without regard to the total context in which the media program functions has very serious limitations. Summative evaluation happens AFTER the program has been finished and, since no formative evaluation was done, no changes in the program were made based upon evaluation. Such changes might have contributed to the success of an otherwise unsuccessful attempt, or even greater success of a program which appeared to be only moderately successful.

INSTRUMENTS ANALYZED *

The following instruments were introduced. Included here are some of the points made concerning what is measured and what is not measured by each technique. Examples of the "so what" test should be given by the presentors and the participants--describing how the particular instrument has contributed to or been of little use to a specific program.

Standards as Measuring Instruments

> A discussion may be held concerning the role of standards in evaluating programs. Points to discuss include:
>
> 1. who creates standards
> 2. how are standards approved or accepted
> 3. how are standards enforced
> 4. what progress is made as a result of the publication of standards.

1. AASL/AECT, Media Programs District and School **

What is measured	*What isn't measured*
1. quantitative figures for materials and equipment	*1. condition of collection and equipment*
2. "access to" titles rather than "in building" collections	*2. quality of collection and equipment*
	3. relevance of collection to the curriculum
	4. currentness of collection

2. New Jersey

This is a sample of a state's attempt to adapt the quantitative guides given in the 1969 national standard.

What is measured	*What isn't measured*
1. quantitative	*1. same as preceeding example*

3. California

In this example, California has drawn upon national standards, but these standards have been adapted freely. The title is a misnomer as only three pages treat qualitative concerns.

*Sample pages from most instruments which are discussed may be found in Appendix A.
**Complete citation may be found in the Bibliography.

What is measured	*What isn't measured*
1. largely quantitative	*1. quality measures not measured in depth*
2. introduces growth over time: 3 years ago, 2 years ago, last year, this year.	*2. whether increase in budget was adequate*
3. measures collection size	*3. use of space*
4. introduces location of collection: district or building level	*4. inflation rate versus budget increases*
5. introduces a grid scale for overall look at program	*5. how well budget is spent*

4. Nebraska

The Nebraska guide is the result of a complete revision and compilation of many other instruments and newer techniques.

What is measured	*What isn't measured*
1. comparative figures for budget expenditures over time	*1. actual impact on teaching units and student learning*
2. services, staffing and collection rated on a five point scale from superior to poor.	*2. precise ratings or evidence to general philosophical statements (merely yes, no) for many items*
3. program components against a five level continuum of progressive quality-statements	*3. the impact of federal money on budget and maintenance of local effort.*
4. side-by-side comparison of quantitative figures (building level with state, regional and national)	
5. attitudes and opinions of students and teachers.	

5. AECT

The AECT instrument draws heavily upon the Nebraska instrument using many of the same features but does draw upon the 1975 national standards.

What is measured	*What isn't measured*
1. percent of quantitative figures met by building (measured against state and national)	*1. any one aspect of program comprehensively or in detail*

6. Fulton . . .

One of the most used. An earlier evaluation instrument

What is measured	*What isn't measured*
1. best professional judgement of program position along a continuum of descriptive statements from poor to exemplary	*1. any judgements based upon objective data*

OTHER MEASURES OF QUANTITATIVE PROGRAM ASPECTS

Participants may be introduced to a list of objective data types which might be collected in quantitative assessment. These measures include:

Time
Outputs
Occurrances
Items
Successes/Failures
Facilities (space)
People
Money

Examples: Time -- How long it takes to answer reference questions or catalog a book

How long it takes from the time a teacher recommends a filmstrip until the library purchases it and makes it available for use.

Output -- The number of books cataloged.

The number of cards filed.

The number of books stolen.

Occurrences -- The number of times a certain behavior or activity takes place (use of card catalog, number of children looking for magazines, number of puppet shows)

The number of booktalks given.

The number of reference questions answered.

The number of stories told to the number of students listening (one story to 500 or ten stories to five)

Items -- Number of books, filmstrips, chairs . . . (Best here to standardize counting according to guidelines given in Seibert, Ivan N., Handbook X . . .

Success/Failure -- Number of reference questions answered/unanswered.
Number of requests for equipment which were filled/unfilled.
Number of compliments/complaints (how do you count "golden silence?")

Facilities (space) -- Number of square feet for circulation area.
Number of square feet for production area.
Number of students who can be seated in the reading room.

People -- Number of staff members.
Number of volunteers.
Number of students.
Number of teachers.

Money -- Amount spent per pupil from local funds.
Amount spent per pupil from federal funds.
Amount given as gifts.
Cost of materials.
Cost of services.
Cost projections of alternative methods of doing tasks.

Participants need to be given some experience in designing what, how much, and for what reason to collect quantitative data. Practice may be given by having them use a matrix as follows:

WORK SHEET

CRITERION OR OBJECTIVE	WHAT TO MEASURE	HOW TO MEASURE: TIME ,OUTPUT, . . .	WHAT DOES IT MEASURE	WHAT DOESN'T IT MEASURE	SO WHAT	SUMMATIVE OR FORMATIVE

CRITERION OR OBJECTIVE	WHAT TO MEASURE	HOW TO MEASURE: TIME ,OUTPUT, . . .	WHAT DOES IT MEASURE	WHAT DOESN'T IT MEASURE	SO WHAT	SUMMATIVE OR FORMATIVE
Increase usage of audiovisual equipment by 10 percent	Pre and Post measures of equipment circulation	Output–number of circulations on daily basis on calendar or cards	If circulation raises by desired amount	Quality of usage, impact on teaching, whether the equipment is really used Perhaps it was merely checked out.	Not a very revealing measure of program. Rethink the objective	Summative
Have enough 16mm and spares to handle requests at current usage levels	Amount of usage and need for backup quipment with a projector for replacement	Time–put clock on each projector to log usage hours. Output–Number of circulations of 16mm's Success/failure– How many requests for projectos could not be satisfied Money–Cost of replacement machines, cost of projectors per usage	Time that projectors are actually operating. Number of projectors needed to satisfy requests Cost of equipment for this service	Quality of usage, Who is using the projector (only English teachers?) How many projectors are needed if usage levels increase because of inservice training?	Gives concrete figures and cost figures to keep equipment usage at status quo level–program projection and improvement lacking	Summative Note: Could be formative if part of a continuous program of measurement, improvement, measurement, improvement

Quantitative measures are important for measuring many aspects of program in order to make sound decisions for program improvement. While they do not reveal quality, quality will be non-existent if quantitative measures are not present and meaningful: children can't read widely without books at their disposal; reading skill will not increase if progressively difficult books are not available; children won't read unless they are given time and encouragement to do so; teachers won't use 16mm projectors if there are never enough to go around or if they constantly break down.

Participants should discuss thoroughly several difficult but program-important problems:

1. determining how the more complex issues can be measured quantitatively.

2. questioning the collection of normal statistics such as circulation counts, numbers of reference questions, and others, unless these statistics are contributing to evaluation of specific program objectives.

Participants were given the assignment of designing as individuals or in groups one or more qualitative measures that would have an impact on decision-making.

LIESENER'S TECHNIQUE[1]--QUANTITATIVE SECTIONS

Liesener has designed some valuable steps which reduce the total effort (time) and expenditures for a wide variety of services into actual cost figures which can be very useful in program modification.

Liesener's model (p. 50) can be explained and enough of his steps described to make the quantitative measures that he advocates meaningful.

Participants were given a set of dummy figures for reference materials and time spent on reference which can be placed in Liesener's Data Collection Guide[2] and practice figures follow. Participants learn to place their data into the costing matrix[3]

Note: this aspect of Liesener's work can be adapted into a number of quantitative measurements which participants may need for their own program improvement such as costing out time spent on circulation tasks to see how much of the professionals day and budget is being expended on this task. Such analysis may lead to a streamlining of circulation procedures, the hiring of clerical staff, the use of student or parent volunteers in order to free the librarian/media specialist to work with instructional units or with individual students and teachers. The possibilities are endless.

Credit Line: The sample(s) from *A Systematic Process for Planning Media Programs,* by James W. Liesener, are reprinted (used) by permission of the American Library Association; copyright 1976 by the American Library Association.

[1]Leisener, James W., *A Systematic Process for Planning Media Programs,* Chicago, ALA, 1976

[2]*Ibid.*, pp. 115-128

[3]*Ibid.*, pp. 129-151.

PRACTICE DATA FOR COSTING OUT REFERENCE SERVICE WITH LIESENER COSTING METHODS

REFERENCE HOLDINGS

	CURRENT HOLDINGS	NUMBER ITEMS REPLACED	NUMBER ITEMS ADDED	TOTAL NO. ITEMS PURCHASED	COST RANGE	AVERAGE UNIT COST
ENCYCLOPEDIAS	4 sets	1 set	none	one	---	$225.00
BASIC TOOLS	175	10	15	25	$5.00-25.00	$13.00
INDEXES	1 (reader's guide)	1	0	1	$25.00	$25.00

EXAMPLE:

Hour	Activity
9:00-9:45	II. B.
9:45-10:00	II. E. 3
10:00-10:30	II. D.

Day_____ Date_____ Day_____ Date_____ Day_____ Date_____

Hour	Activity	Hour	Activity	Hour	Activity

Categories of Reference Service Tasks - Liesener

II.B. Assistance in identifying and locating materials in centers
II.C. Assistance in identifying and locating materials not in centers
II.D. Alerting the user and current awareness services
II.E. Bibliographic and searching assistance
1. computer searching fees or time costs
2. assisting users in compiling bibliographies
3. performing simple subject searches
4. compiling exhaustive bibliographies
5. evaluating materials and/or preparing annotations or critiques
6. preparing bibliographies or state-of-the-art review
7. computer searching activities
II.F. Answer services
1. answering simple fact questions in person or by mail
2. answering more complex and time-consuming questions
3. using informational retrieval systems for answering questions
4. conducting research and development studies

Sample Data Collection

Professional

CATEGORY	TIME	SERVICE OUTPUT	OPERATIONAL UNITS	UNFILLED REQUESTS
		Day 1		
II.B.	38 min.	19		4
II.C.	10 min.	2		1
II.D.	1 hour	1		
II.E.2	10 min.	3		
II.E.3	15 min.	4		
II.E.5	35 min.	1		
II.F.1	40 min.	15		4
II.F.2	20 min.	3		1
		Day 2		
II.B.	20 min.	16		5
II.E.3	30 min.	8		2
II.E.4	15 min.	1		
II.F.1	1 hour	30		6
II.F.2	35 min.	3		1

CATEGORY	TIME	SERVICE OUTPUT	OPERATIONAL UNITS	UNFILLED REQUESTS
		Day 3		
II.B.	10 min.	7		
II.D.	20 min.	1		
II.E.4	30 min.	1		
II.E.5	45 min.	2		
II.F.1	30 min.	16		3
II.F.2	20 min.	2		
		Clerk		
		Day 1		
II.B.	1 hour 45 min.	85		10
II.F.1	30 min.	10		4
		Day 2		
II.B.	1 hour 45 min	72		16
II.F.1	45 min.	16		8
		Day 3		
II.B.	1 hour 45 min.	65		14
II.F.1	45 min.	18		10

1 Professional works 7 hrs/day. Salary $14,000/year
school year = 180 days

1 Clerk works 7 hrs/day. Salary $5,000/year
school year = 180 days

Total budget for materials, equipment, supplies, repair, rental = $5,600.00

Note: Other figures are needed for final program costs.

TOTAL PROGRAM (SERVICE) COSTS

	STAFF ONLY	TOTAL	PERCENT OF TOTAL COST	VALUE IN PERCENT
I. ACCESS TO MATERIALS, EQUIPMENT, AND SPACE	$5,986	$10,086	41.0	
II. REFERENCE SERVICES	7,749	8,324	33.8	
III. PRODUCTION SERVICES	2,500	4,000	16.2	
IV. INSTRUCTION	1,140	1,140	6.0	
V. CONSULTING SERVICES	570	570	3.0	

OTHER MEASURES LEADING TO MORE QUALITATIVE AREAS OF PROGRAM

Best Professional Judgment

Many evaluation techniques include best professional judgment as a measurement tool. It is most often used with regional accreditation teams who examine quantitative and descriptive data collected by a school, make observations of their own, and then use best professional judgment to draw their evaluative conclusions. Obviously, the person doing the evaluation is important.

Best professional judgment is done by a judge(s) who

a. may be a friend--or an enemy

b. has much sympathy or little sympathy for the media center program

c. has an ax to grind

d. wishes to be very supportive of improving program

e. compares your program with his/her own

f. will be rated by "best professional judgment" (perhaps by someone in your school which is now being rated) in the near future.

Participants will want to review the strengths and weaknesses of outside evaluators, i.e., what's good about an outsider evaluator, what can and cannot be expected of them, what to do and not to do when you are an evaluator.

What are the advantages of an outside evaluator?

1. An outsider often carries more weight with the decision makers since administrators may have more confidence in the outside evaluator.

2. An outside evaluator should have a less biased opinion and should be less likely to need to make things look good.

3. The outsider may not be confined to the limits which could be imposed upon the in-house staff member. The outsider could be able to evaluate from a wider perspective.

4. The administration may be more likely to consider a report written by an outsider who seems to carry more prestige or authority.

What can or cannot be expected of the outside evaluator?

The outside evaluator cannot possibly see the entire picture because the visit is brief. Real issues could be missed. If the evaluator is a practicing professional he/she could make an unconscious comparison to his own center, other places he has seen, or how he thinks the program should be managed.

The outside evaluator cannot FORCE the administration vis-a-vis recommendations as part of the final report to hire staff, increase budget, and other "miracles" which librarian/media specialists would enjoy even though such a recommendation is based upon an analysis of the present situation.

What should you do and not do when you are asked to be an outside evaluator?

If you are asked to act as an outside evaluator what do you look for in making your appraisal?

the look of the facility; the atmosphere of the library/media center.

quality of collection? Are titles leftovers from Arrow Book Club, parent donations from the attic or basement, discards when the high school moved to a new building, or free filmstrips from pudding manufacturers?

students seem to know what to do in the library/media center?

students and teachers seem happy to be in the library/media center?

bulletin boards are attractive in the library/media center.

library/media center is reflected in classrooms in sights and sounds of library materials in use and on classroom bulletin boards.

evaluator asks pre-determined questions of students, teachers, staff and administrators.

apply evaluation forms designed for the visit or other evaluation forms.

A variety of evaluation techniques are available to the researcher. Among these are interviews, observations, scales, and ranking. Explanations of these techniques follow.

Questionnaires

Questionnaires are a group of printed questions used to elicit information from respondents by means of self-report. Questionnaires have several advantages over interviews:

less expensive

easy of preparation and distribution and tabulation

can be distributed without interviews

offers respondents an opportunity to prepare and revise their answers.

Researchers in school library/media centers are unlikely to use the most popular--the mail questionnaire--unless you interpret putting a questionnaire into a teacher's box as "mail."

A "mail" questionnaire is susceptible to:

gross mis-interpretation

self-selection of respondents

carelessness

other forms of abuse

The researcher should confirm all data received and be suspicious of all data received.

Some other problems occur with questionnaires:

1. seeking data which could be better determined other ways; asking opinions rather than evidence; asking for great quantities of information.
2. respondent usually doesn't know investigator, what he means, what he wants to know. You may be unsure or mistaken in judging from the responses what is meant by the answer.
3. how to get honest answers
   a. ask questions in two different ways
   b. guarantee anonymity which may bring more candor or less concern for truth

If questionnaire is your BEST means

1. you must make questions (and answers) clear to your respondents (and yourself) and as free as possible from different interpretations
2. maximize the number of returns.

To insure clarity in questions:

1. provide careful directions to the respondent as to how to complete the form and report the answers.
2. define all technical terms.
3. any deviation from above terminology should be reported to the respondents ex: media center rather than library.
4. offer respondents a set of possible answers, but this stiffles creativity of answers in many respondents.
5. on the other hand, allowing creative or free-style answers may result in non-comparable answers.
6. read questions aloud to elementary students.

Pretest questionnaires to determine if respondents understood what was meant by the questions and if you interpreted the answers correctly. If you change the questions, you must again pretest. The pretest will help you

1. reword.
2. secure information about length of time it takes to complete.
3. help compile answers to open-end questions which could form the basis for a check-list of answers.

To maximize the number of responses, motivate those who receive the form with the promise of a compilation of explanation of the results.

Interviews

The interview is the purposeful conversation between the researcher and the respondent.

Advantages

1. You get the information directly from the person rather than vicariously through a paper and pencil exercise.
2. You are able to see that the person understands exactly what you need to know

Disadvantages

1. It is time consuming.
2. Data can be very difficult to code and reduced to quantitative measures.
3. The interviewer can ruin the data by introducing subtle or blatant bias.

Types Of Interviews

Structured (little deviation form planned questions)

a. Fixed alternative type: (Do you like to read? a. no, b. sometimes, c. yes)
(How many books do you read a week? a. 0, b. 1-2, c. 3-5, d. over 5)

b. Open ended items using a funnel question which guides or gives a situation:
(Compared to other school libraries you have used, what are some activities that we provide that you find the most helpful?)

c. Scale items - these questions present a statement and seek some form of agreement
(I find it easy to check out a filmstrip projector to take home. SA A N D SD DK)

Whom Do You Interview

1. those directly involved in the project
2. those who should have been involved but were not for some reason

How Many Interviews Should You Schedule

1. All those involved if the group is small
2. A sample of those who were involved or should have been involved

Do's And Don'ts For Interviewing

1. From Kerlinger, pp. 485-86

a. Each question must lead to the research objective (not counting those questions designed to put the person at ease, etc.)

b. Ask the best type of question for the information you need (open ended, scale, or fixed alternative)

c. Make the questions clear and unambiguous (one idea per question)
bad: What do you find the most fun and the most useful when you come to the media center?
better: What is the most fun about coming to the media center?

d. Don't ask leading questions
bad: What is the most fun about coming to the media center?
better: Do you have fun when you come to the media center? if yes, what things do you do in the media center that are the most fun?

e. Don't ask things the person would not know
bad: Is the media specialist well qualified to hold this position? Asked of a student or teacher.

f. Be careful about sensitive areas - use soft words rather than harsh ones
bad: Why do you think Mrs. Jones yells and screams at students?
better: Why do you think Mrs. Jones shows that she is upset with students?

g. Don't make one answer socially desirable
bad: Mrs. Jones really knows how to tell stories well. Do you enjoy them?

2. From Goldhor

a. Don't put too much distance between yourself and the person being interviewed (dress, manner of speech, approach, friendliness - lack of)

b. Don't reveal your own bias
bad: your answer hit the nail on the head

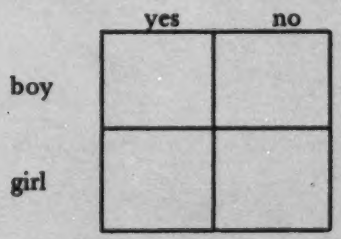
c. Don't interpret the answer you hear in terms of your own bias
(what I think you said is definitely what I've always believed)
bad: He said, "I hate libraries." I heard, "libraries", and replied, "they are lovely places aren't they?"

d. Try to check on the honesty of the person (follow-up questionnaires, observations, etc.)

How To Code Responses

1. Fixed alternative - easy - have coding instrument to mark during the interview.

Do you like to read?



2. Take notes - then try to categorize the responses into patterns

3. Tape record - transcribe - then categorize (extremely time consuming but more accurate)

Ethics

1. Keep the responses annonomous if that is appropriate

2. Have participation voluntary

Observation

Observation as a technique in research is the collection of data by the researcher who observes the phenomenon first hand.

Techniques

1. Decide on the categories of the things to be observed. You should be selective. Each category should be defined carefully and some instances of it listed for the observer so that he knows how to categorize it properly.

2. One need not observe all day every day. Take samples of time periods until you are confident of the representativeness of the data.

3. The observer may rate behaviors or occurrences on a scale

unfriendly			friendly		efficient			inefficient	
1	2	3	4	5	1	2	3	4	5

caution: rating scales can produce much error:

1. halo effect (I like you - you can do no wrong)
2. severity (I don't like you - you can do no right)
3. leniency (Her citation from the *Reader's Guide* was almost correct - I'll give her credit
4. central tendency - (she's about an average story teller)

Do's And Don'ts

1. Trim the bias of the observer down to a minimum
2. The observer must be knowledgeable enough to be able to recognize the behavior or the occurrence when he sees it.
3. Don't worry too much about the observed acting too differently when they are being observed.
4. Don't try to have the observer try to collect so many categories of behaviors that the error rate becomes unnacceptable
5. Be sure that you are measuring what you think you are (George is reading his textbook - actually George is reading a comic book which is inside his textbook)

What Kind Of Data Might You Have

1. quantitative
2. ratings (best professional judgement)
3. ranking

Scales

Frequency

Yes	Sometime yes	Sometime no	No	
Regularly	Occasionally	Rarely	Never	
Daily	Weekly	Monthly	Yearly	
Always	Frequently	Occasionally	Seldom	Never
Not operational	Partially operational	Fully operational		
Very extensively	Considerable	Some	Very little	Not at all
Observed	Not observed			

Value Or Approval

Superior	Above average	Average	Below average	Poor--missing
Very important	Somewhat important	Of little importance	Of no importance	
Entirely satisfactory		Usually satisfactory	Unsatisfactory/needs improvement	
Much improvement needed			Little improvement needed	

Degree of acceptance:

Unacceptable	Questionable	Accept with reservations	Accept in general	Endorse completely

Degree of implementation:

Not implemented	Weakly implemented	Average implementation	Strongly implemented	Fully implemented

Adequate	Inadequate			
Excellent	Good	Average	Fair	Poor
Super cool	Cool	So-so	Gross	Super gross

Like ____:____:____:____:____:____:____: Dislike (the semantic differential)

Attitude Scales

Note: One must realize respondents may not always be honest.

A. Likert scales (ordinal scales)

These are used to measure attitudes and usually employ five choices expressing agreement. You may use other choices than the words "agree" or "approve"
Example: 1. SA A UN D SD

2. 1. elementary 2. junior high 3. senior high 4. college 5. graduate school

B. Thurston scales

These are used to measure interval data. They may also measure favorableness. They employ equal appearing intervals and ivolve judges who rate each item. An example would be student scores compared to judges median score or "scale value." These always use many items.

Example:

Give a rating to each statement:

I believe that media centers are essential for effective teaching.

disapprove				neutral				approve			
1	2	3	4	5	6	7	8	9	10	11	12

I go to the media center because it is quiet.

disapprove				neutral				approve			
1	2	3	4	5	6	7	8	9	10	11	12

I think that too much money is spent on media center materials.

disapprove				neutral				approve			
1	2	3	4	5	6	7	8	9	10	11	12

C. Other items to consider:

A. Should your scale include the "don't know" or "no opinion" ratings?

Advantages: provides rater with a "way out"
provides less error with other ratings

Disadvantages: more difficult to analyze
lets rater hedge

B. Positive to negative vs. negative to positive scales--which ones and why?

a. yes----------no; good----------bad

b. no----------yes; bad----------good

Statisticians usually recommend positive to negative.

Sometimes negative to positive is good. For example children answering

Do you like to go to the library

a. yes sometimes no

b. no sometimes yes

"b" scale is better choice since most children will mark "yes" to scale "a" without really considering the "sometimes" and "no" responses.

Ranking

With this technique a person is given a number of items or statements and he ranks them according to

agreement

value

frequency

For example: As a classroom teacher knowing that you can have only one specialist in your building next year, rank the following specialists from 1 to 4 (1 is highest) according to which you would rather have the administration employ

physical education teacher

music teacher

art teacher

media specialist

STATISTICAL ANALYSIS

Statistics provide systematic, objective procedures for collecting, organizing, summarizing, and analyzing large quantities of data that can be quantified. In addition to this, statistics reduces the sheer volume of data to summary values which can be displayed on graphs or charts, or utilized in decision making to greatly enhance the objectivity of that function. As such, statistics facilitate communication and interpretation of what the data are really saying. There are even statistical procedures which permit the extrapolation of findings far beyond the restricted setting in which the research was actually done.

The students have spent part of two days discussing the appropriate data to be collected for program evaluation and a number of instruments were introduced for measuring and collecting data.

The actual data reduction and analysis was done on computing facilities at the University of Pittsburgh. The *Statistical Package for the Social Sciences* (SPSS)[4] was the particular package of statistical programs utilized by the participants.

The objectives of this section will be to gain some understanding of some of the basic techniques that are applied in statistical analysis, while concentrating on two of the simplest and most useful types. One is the chi-square test of independence, the other a t-test of significant differences in the measures on two groups, or the same group if two measures, one pre and one post, are to be used. The latter is commonly used in evaluating experimental programs whereby one is interested in whether or not a new material, or a new method of instruction, or a new curriculum, has been instrumental in improving the performance of students in the experimental program. The question being evaluated is, "Did the students in the experimental group perform better (score higher on a standardized test) than students who received regular instruction?" The difference between a student's pre-instruction performance and his post-instruction score is called a gain score. The evaluation of the experimental program is based on differences in gain scores between the "experimental" group who had the new material or method or instruction, and the "control" group who did not. But before this will really make sense, one needs to know a little something about some other concepts that interrelate to give the data analysis validity, reliability, and credibility. Among these are:

Some measurement theory

The concept of a distribution

[4]Norman H. Nie, C. Hall, *et. al.*, *Statistical Package for the Social Sciences*, 2nd ed., McGraw-Hill, 1970.

Errors in making observations

Measurement scales

Sampling theory

Statistical hypothesis testing

Research design

The physical scientist

Observes a phenomenon

Decides on the properties to study

Formulates hypotheses about the properties relevant to the problem and ignores others

Collects data and employs the scientific method to see whether or not the data support the hypotheses

This is fine for studying phenomena/objects/organisms with fixed properties which can be measured several times to check the accuracy of the measures.

Other phenomena, especially those in the behavioral sciences,cannot be studied more than once in the same organism or object. The process of observing or measuring the phenomenon changes or destroys the very thing that is being measured or evaluated. Controls must be introduced to insure that the only thing which caused a significant increase in the gain scores for the experimental group was the new materials or method of instruction.

It is especially difficult to measure and assess human responses to stimuli because humans never react to the same stimuli exactly the way on the second encounter as they did at the first--a little faster, a little slower, but never exactly the same.

Longitudinal studies, or time-series studies, which measure change over time offer a great deal of potential for evaluation assessments.

Sources of Data for Evaluation Assessments

Effort is made to make observations and data collection under as natural conditions as possible.

Ratings

Surveys

Inventories or pencil & paper tests

Recorded data - psychological functions

Errors in Making Observations

There are a number of ways that sources of invalidity can work their way into the collection of data. Some of these are errors of observation. Some are human errors in which the mind fools the observer. Examples of this psychological phenomenon are:

Habituation

Expectation

Suggestion

Even when great care has been taken to insure the accuracy of the measurements, and the appropriate controls have been applied to the experiment, there still may be disagreements between measurements which are repeated under identical conditions. These differences are considered to be random errors of measurement and are attributed to chance.

Measurement Theory

Define: Variables and Constants

Differentiate between: Discrete and continuous measures

Measurement Scales

Nominal

Ordinal

Interval

Ratio

Interpreting Data With Descriptive Statistics

Descriptive statistics are quite easy to understand and very valuable in examining population data. Workshop participants should understand the meaning of population (measuring *all* persons

within the target group). Valuable techniques for looking at data include:

1. frequencies (23 said "yes", 13 said "no")
2. graphing data (bar graphs, line graphs)
3. percentages
4. ranking
5. measures of central tendancy (mean, median, mode)
6. Indicators of relative position in a distribution (Percentile, standard deviation)

Many workshop participants already are aware of and can compute most of the measures listed above. What needs to be emphasized is that descriptive statistics should not be sold short because they are simple to compute and are meaningful for interpretation. If participants are not familiar with the above measures, some simple examples can be used from actual school library situations to illustrate the use of the statistics. For example, compute the percentage of children who read at least 100 books during the school year; graph usage data of 16mm projectors to analyze peak usage loads and thus predict the needed numbers of projectors at various times of the year; have children rank which of ten books they like the best and compute the winner from their markings; what is the percentile of children computed for library skills on national tests?

Interpreting Sample Data with Statistics

Sampling Theory

When all members of a population cannot be measured or when it would be too expensive or impractical to do so, a sample of the group may be measured to represent the entire population. Almost all statistical techniques are based on random samples of data. All researchers need to know something about sampling and sampling theory and how random samples are obtained. Familiarity with computerized random number generators or tables of random numbers is essential.

Strategy for Making an Objective Decision Using a Statistical Analysis

A test statistic is decided upon. A sample of data are collected and the statistics is computed and compared with the tabled value for the appropriate degrees of freedom to see if the value of the test statistic falls in the region of rejection for the null hypothesis.

Workshop participants should discuss the problems that will normally arise in using sampling techniques in a school:

Problems of sampling within a class:

1. sample size will usually be too small unless the class is very large (100 or more)
2. it is very difficult to have an experimental and a control group within a class because they will interact with each other in ways that can influence the outcome.

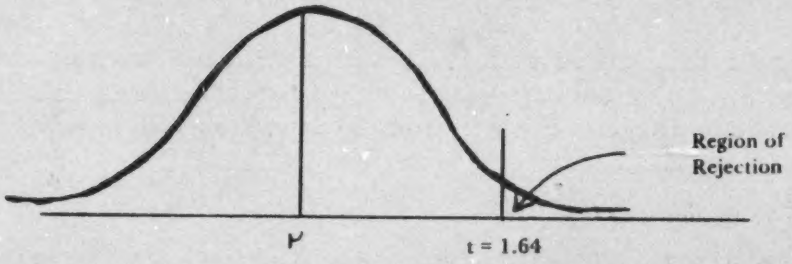
Solution: sample classrooms

1. determine the number of sections (heterogeneous groups)
2. are classes biased on treatment variable before you begin? If yes, throw biased classes out from research consideration.
3. randomly assign classrooms to treatment
4. if a questionnaire is to be given, one third to one half of the classrooms should be sufficient
5. if classes are homogeneously grouped then you must have individuals from all levels. Many times this will require that a few students must be selected from each group. If there happened to be two classes on each ability level, then one could be selected from each level.

Warning: Before proceeding with an experiment, questionnaire, treatment, etc., the researcher must have confidence that this sample is representative of the population and is not biased in a way that will skew the outcome. There are sophisticated ways to check representativeness but they may be beyond the scope of a short workshop. In the absense of these techniques, a common sense judgment will have to suffice.

The T-Test

The T-test is a very useful and simple test to understand. Sample data are collected so that a mean can be computed. For example, two groups of students are given two different types of library skills instruction. Their test scores can be added up and a mean score for each group can be computed. The question is whether the difference in the two mean scores is statistically significant. The T-test is computed and compared with the tabled value for the appropriate degrees of freedom to see if the value of the test statistic falls in the region of rejection for the null hypothesis.



If the value of the test statistic is not large enough (larger than 1.64 in this case) to place it in the region of rejection, then there is not enough evidence in the sample data to conclude that the material or method of teaching resulted in a difference in gain scores large enough to be statistically significant.

In the example above where there are two different methods of teaching library skills used, one may determine by the t-test that one method is better than another. One must compute not only statistical significance but also practical significance. Perhaps one method involves computer-assisted instruction at a cost of $5,000 per student for one year. Perhaps the other method utilizes paper and pencil exercises coupled with filmstrips and audio tapes and costs $10 per student per year. A trade-off judgment must be made and that judgment is not always a simple matter.

The X^2 Test of Independence

This statistical test determines whether or not the distribution of responses on one variable is independent of the way the individuals responded or were distributed on a second variable.

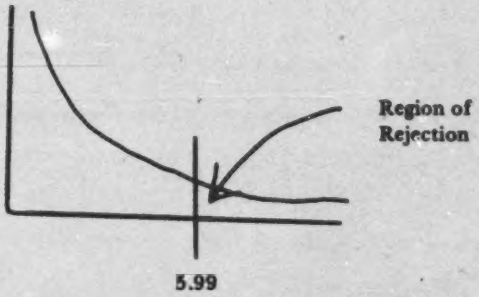
The data are arranged into a bivariate frequency distribution.

Reading Ability

Sex	Good	Average	Poor	Total
Male	10	24	16	50
Female	15	23	12	50
	25	47	28	100

$X^2 = 6.52$, df = 2, $p < .05$, C = .32

This information will be found on the computer printout after the participants run their programs. It helps the researcher to determine objectively whether or not the way the students were distributed over reading ability was independent of their sex. If the null hypothesis of independence is true, X^2 with 2 degrees of freedom (df) will look like this:



The probability of getting a X^2 value that large or larger when the null hypothesis of independence is true has a probability less than .05. Thus it would be concluded that reading ability is not independent of sex for this sample of data.

The X^2 test always requires frequency data and that frequency data must fit into a table such as the following:

> Booktalks were given to two groups of students; one in person, the other via television. Students recorded the number of books they read two weeks before the experiment and for two weeks after the booktalks. (The weeks were carefully chosen to avoid other stimulation or deterrents to reading.) The number of books read by each group after the month's experiment are recorded in the following table:

		Booktalks	
		In Person	TV
Number of books read	Before	35	40
	After	65	42

$X^2 = 7.063$ df = 1 critical value = 3.8

Therefore, since our X^2 value is greater than 3.8 it is significant. Inspecting the cells we find that the in-person method of booktalks produced the best results. Practical significance must now be judged. Did all students in the "in person" group read more or did just a few? What percent of the students read more? What was the mean increase per child? (This could be tested statistically by me and of the t-test.) Is the time used in giving in-person booktalks worth the results?

The Computer as a Tool to Aid in Analysis

A handout containing a model computer program from the Statistical Package for the Social Sciences (SPSS) was distributed to the participants.

The concept of "canned" statistical programs stored in a library was presented. Job control cards to call out and use these programs were explained. Organizing the data for keypunching on the data processing cards and the appropriate format statement to make the cards machine readable were examined in turn. A verbal introduction to the available computing facilities, including the card reader and printer in the Remote Job Entry (RJE) Station in the building where the institute was being held, followed.

Participants separated into groups by level, interest, and developed a project based upon needs. Sample data were generated and applied to a worksheet. Participants then key punched data cards and program cards. Data were analyzed through a SPSS program which applied t-test, chi square, and ANOVA

Note: A sample program may be seen in Appendix B

Manual Tabulation and Computation of Statistics

It is not difficult with the help of a pocket calculator that has the normal arithmetic functions as well as square root to compute the statistics if a computer is not available. An excellent source of assistance would be a copy of Bruning, James L. and Kintz, B. L., *Computational Handbook of Statistics*, 2nd ed. Glenview, IL, Scott, Foresman, 1977. Their step by step method can be followed by the novice without difficulty. The novice would be wise to have the figures checked by someone who knows something about statistics.

Drawing Conclusions (Generalizability)

Results are only as valid as the care taken in planning, collecting, and computing the data. If there is time and funds, a second project will be of value in supporting the findings. Care must be taken to generalize the findings only back to the populations from which the sample is drawn, i. e., the findings in one school do not generalize to all students in the district, the state, or the nation - only to the school from which those students were drawn.

Liesener Reconsidered

A number of aspects of the Liesner technique are not quantitative but do contribute to a more qualitative assessment. Liesener's usage of extensive input from users in his Step 3, "Determination of service preferences and priorities in relation to local needs," and later in his technique where he reports back to the user what changes can be made in program (Step 7: communication of preferred services currently feasible to total client group) is an attempt to achieve consensus in the evaluation process rather than media specialits trying to create change alone.

> Participants have rarely communicated as closely with user groups as Liesener recommends and so will want to discuss how this might come about in their particular situations.

PSES as an Assessment Instrument

Since Dr. Loertscher is the co-author of the *Purdue Self Evaluation System for School Media Centers* (PSES), an introduction was given which summarized two research projects:

1. Loertscher, David V., and Land, Phyllis, "An Empirical Study of Media Services in Indiana Elementary Schools," *School Media Quarterly*, Vol. 4, Fall, 1975, pp. 8-18.
2. Stroud, Janet Gossard. *Evaluation of Media Center Services by Media Staff Teachers and Students in Indiana Middle and Junior High Schools*, Ph.D. dissertation. W. Lafayette, IN, Purdue University, 1976.

PSES is a survey of teachers, students, administrators and media staff which compares the perception of these groups on numerous service statements in nine service categories. Each statement is rated on a frequency of occurance scale (regularly, occasionally, rarely or never, don't know).

Participants were given a computer printout containing actual data obtained from a school which had used the PSES technique. Participants were required to analyze the data carefully, draw conclusions about the media center services in their school and draw up suggestions for improvement.

Copies of computerized data reports that can be used in other workshops can be obtained by writing Hi Willow Research and Publishing
Box 2243
Idaho Falls, Idaho 83401

Three techniques are used to analyze PSES data:

1. Comparison of user group means for each service to compare the overlap of perception.

2. Graphing services frequencies for an "at a glance" look for problem areas.

3. Analysis of which segments of users are being reached and which are not.

The "so what" test is applied to each of the three techniques. Participants find it easier to plan a program of improvement for someone else before they attack one of their own.

CONCLUDING REMARKS ON STATISTICAL PROCEDURES (A REVIEW)

Using descriptive statistics

When giving questionnaires, we can often just use %'s to understand the data.

"When I ask, the librarian helps me find a book I'd like to read."

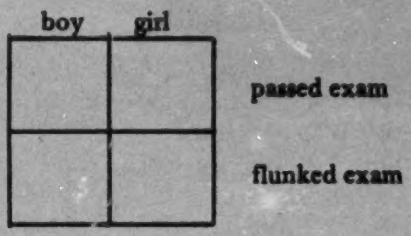
SA	A	U	D	SD
%	%	%	%	%

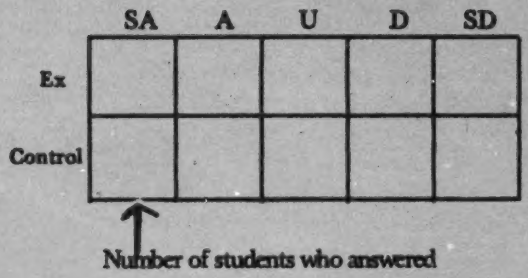
T- Test - requires two means which can be tested:

scores on tests, e.g., scores on a pretest and post-test

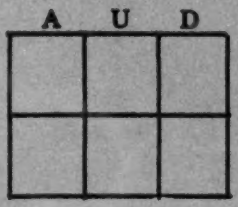
number of trials to criterion (how many times the student goes through the instruction package before he gets 100% on the exam)

X^2 requires frequency counts which can fit into a matrix at least 2x2





if not at least 5 observations in a cell then combine some cells as shown at the right



Statistical Significance vs. Practical Significance

Booktalks via TV vs. in person

Number of books	in person	TV
before	35	40
after	75*	47

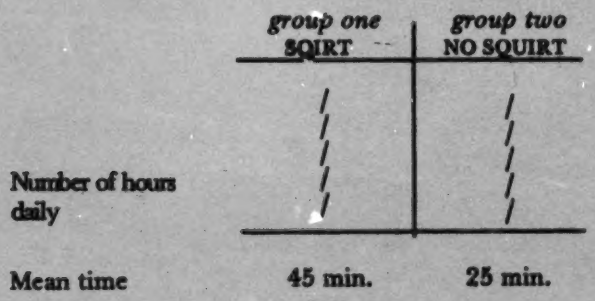
Using hand tally method: $x^2 = 4.6$ df is 1 c.v. is 3.8 therefore sig. at .05 using computer, it prints the sig. level as .00265

Conclusion: something is significant but what? Inspect the cells to find the imbalance in the cells and interpret.

Practically significant? compute:

materials costs
time costs
} for each method, then decide using best professional judgement

SQUIRT vs. no SQUIRT - measured by the number of hours students read



Using hand tally method T is 6.85, c.v. is 3.45 therefore sig. at .05 using computer the sig. level is .049

Conclusion: something is sig. but what? Inspect means. Squirt the best.

Practically significant? Compute cost of squirt, measure against judged values and then decide.

Summary Comments on Sampling and Generalizability

Sampling in a school

Problems of sampling within a class

1. Sample size too small
2. Too much interaction between experimental and control group

Probable solution: Sample Classes

1. Determine number of sections (heterogeneous groups)
2. Are classes biased on treatment variable already? Do not use.
3. Randomly assign classes to treatment.
4. One third to one half classes sufficient for questionnaires.
5. For homogeneous groups: get equal number at each level sample individuals if you must.

Generalizability

Findings can only be generalized from the sample to the population of which it is a part.

APPENDIX A

New Jersey

COLLECTION Materials	Goal	Present Achievement in local school
Books	At least 6000-10,000 titles representing 10,000 volumes or 20 volumes per student, whichever is greater	
Magazines Elementary school (K-6) Elementary school (K-8) Junior high school Secondary school All schools	40-50 titles (includes some adult non-professional periodicals 50-75 titles 100-125 titles 125-175 titles In addition: necessary magazine indexes and duplication of titles and indexes as required	
Newspapers Elementary school Junior high school Secondary school All schools	3-6 titles 6-10 titles 6-10 titles One local, one state, and one national newspaper to be represented in the collection	
Pamphlets, clippings, and miscellaneous materials (vertical file)	Pamphlets, government documents, catalogs of colleges and technical schools, vocational information, clippings, and other materials appropriate to the curriculum and for other interests of students	
Filmstrips	500-1000 titles, representing 1500 prints or 3 prints per pupil, whichever is greater (the number of titles to be increased in larger collections)	
8mm films Single concept Regular length	1 1/2 films per student with at least 500 titles supplemented by duplicates	

SERVICES-SELECTION POLICY

A. A written statement has been developed and accepted by the school board to reflect basic goals and objectives, to allow for the handling of complaints, and to assure quality selection of a variety of materials and equipment. ☐

B. ☐

C. A policy statement has been drafted in general terms and does not yield itself to specific interpretation. ☐

D. ☐

E. No policy statement governing selection exists. ☐

COMMENT:

1.	Is there an existing written policy statement?	*Yes*	*No*
2.	Has it been revised within the past 12 months?	*Yes*	*No*
3.	Is a copy of the policy statement on file within the administrative office?	*Yes*	*No*
4.	Do procedures allow for immediate attention to complaints?	*Yes*	*No*
5.	Are forms available for registering complaints?	*Yes*	*No*
6.	Are there written criteria to assure quality selection of various forms of media?	*Yes*	*No*

MEDIA PROGRAM BUDGET SUMMARY

Check one of the following: Building Level_____ System Budget_____

I. Budget (for media program only)

Enter the correct figures in columns 'a' and 'b' of the chart below to show actual expenditures for the media program in the two years preceding the current year, and in column 'c' to show the amounts budgeted for specific categories during the current year. Specify years in all three columns.

Item(s) of expenditure	Two years preceding current yr. 197 - 197	One year preceding current yr. 197 -197	current yr. 197 - 197
	a	b	c
A. Line item totals* 1. Library books and materials line 54 2.2 - 9	$	$	$
2. Audiovisual materials line 56 2.2 - 11			
3. Books for new libraries ** line 100 2.7 - 4			
4. Furniture and equipment (not replacement) line 101 2.7 - 5 (Report AV equipment only)			
5. TOTAL of lines 1, 2, 3, and 4 above			
B. Per pupil expenditure for media program materials and equipment. Divide line 5 above with the ADM			
II. REVENUE (other than local funds)	$	$	$
A. State Dollars			
B. Federal dollars (total of all funds used for media program) Specify source by Title			
C. Other: Specify			

*Line numbers, titles, and corresponding codes have been taken from the *Annual Finance Report of Nebraska Public School Districts* (Form AFR).

**The term libraries used in line 3 is broadened in this guide to encompass all media for new facilities.

School System Profile - 6

III. EXPENDITURES

Enter the correct figures for expenditures per category in this chart for the years preceding the current year in columns 'a' and 'b', and list budget figures for the current year in column 'c'.

Item(s) listed by specific category	Two years preceding current yr. 197 - 197 a	One year preceding current yr. 197 - 197 b	current year 197 - 197 c
A. Materials: 1. Books a. Hardback	$	$	$
b. Paperback			
2. Encyclopedias/reference			
3. Professional collection			
4. Periodicals (subscriptions)			
5. 16mm and 8 mm film			
6. Filmstrips/slides/transparencies			
7. Recordings: audio, tape, disc			
8. Video tapes/disc			
9. Maps, globes, charts, graphs, etc.			
10. Microforms			
11. Supplies			
12. Rental of materials			
13. Raw materials for production of instructional materials			
14. Other: Specify			
B. Equipment			
1. Purchase			
2. Repair / Replace			
3. Rental			
C. Other (Specify if not listed below) 1. Professional travel			
2. Institutional memberships			
3. Professional growth (Example: workshops)			
4. Other			
D. TOTAL of above	$	$	$
E. PER PUPIL expenditure for media (Divide line 'D' by ADM.)			

MEDIA SERVICES PROFILE

To develop the MEDIA SERVICES PROFILE for the media program under consideration, enter in the appropriate box in the chart below the rating (A, B, C, D, or E) for each media service recorded on the top of each of the preceding pages in this Section. For example, if the service rating for SELECTION POLICY on Page 3 is *C*, an "x" should be placed in the *C* column of the chart on the horizontal line labeled "Selection Policy". After all twelve services have been rated and an entry made for each service in the chart, connect the "x's" with a heavy line to complete the MEDIA SERVICES PROFILE.

Media Services	Media Service Rating				
	A	B	C	D	E
Selection policy					
Selection procedures					
Distribution					
Accessibility					
Organization					
Inservice instruction					
Direct teaching					
Consultative services					
Materials and equipment support					
Production					
Dissemination					
Administrative services					

II. Nature of the Program

A. In the table below, fill in those blanks that are applicable to the learning media staff of your school.

Staff	Full Time	Part Time	
	Number	Number	Total Hours per Week
Professional			
Nonprofessional			
Students			

B. Who is responsible for coordination of the learning media services (name and position)?

C. Indicate the distribution of responsibilities for learning media services among other professional and nonprofessional members of the learning media staff.

D. Do all members of the learning media staff (both professional and nonprofessional) have special training in their areas of responsibility? Specify the extent and recency of the special training.

E. Give evidence that the learning media center has adequate space, equipment, materials, and budget. If there are inadequacies, indicate below the areas of greatest or most immediate need:

1. Space (such as areas for reading, viewing, listening, instruction, individual study, shelving, storage of materials, processing and production of materials, and offices for personnel).

2. Equipment (such as projectors—motion picture, overhead, opaque, slide, and filmstrip—screens, tape recorders, TV sets, record players, radios, copy machines, study carrels, and materials production tools).

3. Materials (such as books, magazines, newspapers, films, filmstrips, film loops, slides, tapes, records, transparencies, pictures, charts, maps, globes, paperbacks, community resource file, programed instruction materials, and special materials for the professional library).

4. Budget (adequate to fulfill requests of students and staff, provide normal replacement and improvement, provide for innovation, and meet accrediting agency standards).

F. What records are kept to indicate the use of the equipment and materials in the learning media center?

G. Do the records show patterns or trends in the frequency of use of facilities, equipment, and materials? If so, indicate their significance for future planning.

H. Is the learning media center open to students and teachers at other than regular school hours? Explain.

Continued on next page.

3. Materials (such as books, magazines, newspapers, films, filmstrips, film loops, slides, tapes, records, transparencies, pictures, charts, maps, globes, paperbacks, community resource file, programed instruction materials, and special materials for the professional library).

4. Budget (adequate to fulfill requests of students and staff, provide normal replacement and improvement, provide for innovation, and meet accrediting agency standards).

F. What records are kept to indicate the use of the equipment and materials in the learning media center?

G. Do the records show patterns or trends in the frequency of use of facilities, equipment, and materials? If so, indicate their significance for future planning.

H. Is the learning media center open to students and teachers at other than regular school hours? Explain.

Continued on next page.

VI. Media Program Budget

In Part A, show actual media program expenditures for the past three years plus budgeted amounts for the current year.

A. Local funds	Three years ago	Two years ago	Last year	This year
1. Audiovisual equipment (hardware)				
2. Audiovisual materials (software)				
3. Audiovisual replacement				
4. Contract – audiovisual				
5. Contract – library				
6. Film rental				
7. Telecommunications				
8. Library books				

VI. Media Program Budget (Cont.)

A. Local funds (Cont.)	Three years ago	Two years ago	Last year	This year
9. Library furniture				
10. Periodicals – subscriptions				
11. Textbooks				
12. Supplies				
13. Building facility modification (describe)				
14. Other _____				
_____				
_____				
B. Total federal funds received in the following programs				
ESEA, Title I				
ESEA, Title II				
ESEA, Title III				
NDEA, Title III				

VIII. Media Program Inventory (Cont.)

B. Facilities (Cont.)

Indicate square footage	Adequate	Inadequate

11. Story telling area

12. Other (list) _____

_____

C. Instructional materials

Number on hand		
District IMC	Building IMC	Total

1. Art prints

2. Art objects

3. Books (Exclude all textbooks.)

a. Sets of encyclopedias and other reference

b. Hardbound

c. Paperback (all types)

d. Professional

4. Charts

5. Curriculum guides

6. Dioramas

7. Disc recordings

8. Documents

9. Films

a. 8mm cartridge

(1) Silent

(2) Sound

b. 8mm reel-to-reel

(1) Silent

(2) Sound

QUALITATIVE EVALUATION CHECKLIST

Factor to be evaluated	Poor				Good				Adequate				Excellent			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Appropriateness of objectives of media program to district philosophy and objectives																
2. Administrative support and commitment to media program																
3. Facilities																
4. Personnel (numerically)																
a. Central office																
b. Building level																
5. Competence of professional personnel																
a. Central office																
b. Building level																
6. Instructional materials																
a. Quantity																
b. Quality																
7. Equipment																
a. Quantity																
b. Quality																
8. Budget																
9. Distribution system																
a. Accessibility of materials																
b. Accessibility of equipment																
10. Involvement of teachers in selection of materials																
11. Involvement of students in selection of materials																
12. Involvement of media personnel in curriculum decisions																
13. Provision for inservice training activities																
14. Staff effectiveness																
15. Past evaluation procedures																
16. Achievement of program objectives																

A. Preliminary evaluation of the school library objectives

This evaluation is a tentative one and forms the first step in the evaluation of the school library. The final evaluation (see Chapter 10) is to be made after all facts have been gathered and all evaluations made in Chapters 2 to 9.

In the following chart, check for each objective of the school library the degree of success with which the objective has been achieved and the importance attached to the objective. Estimating the degree of success can be only a subjective appraisal since precise techniques for measuring this factor do not exist. The code for the symbols to be used in this appraisal is as follows:

A - Excellent
B - Good
C - Fair
D - Poor
F - Not at all

1 - Of utmost importance
2 - Of considerable importance
3 - Of some importance

Degree of success in achieving objectives	Objectives of the school library	Methods now being used by the librarian to achieve objectives: types of library service, activities with students and teachers, etc.
A B C D F 1 2 3		
A B C D F 1 2 3		
A B C D F 1 2 3		

I. INSTITUTIONAL EDUCATIONAL MEDIA SERVICES

CRITERIA

°An institution should have a program of media services administered through an educational media center, and sub-centers if such are needed, which provide the faculty with an adequate supply of appropriate instructional materials.

°The educational media center should be a separate service unit that operates at the same level as other major institutional services.

°An institution should have clearly defined policies, procedures, and plans for its educational media program including short-range and long-range goals.

°There should be a sufficient number of professional media staff members to administer the educational media program and to provide consultative services to an institution's entire faculty.

A. Commitment to the Media Program

Mark only one of the twelve boxes

1- ☐ 2 ☐ 3 ☐ The institution's educational media program does not offer the services of a media center and no clerical or technical staff members are available to administer the educational media program.

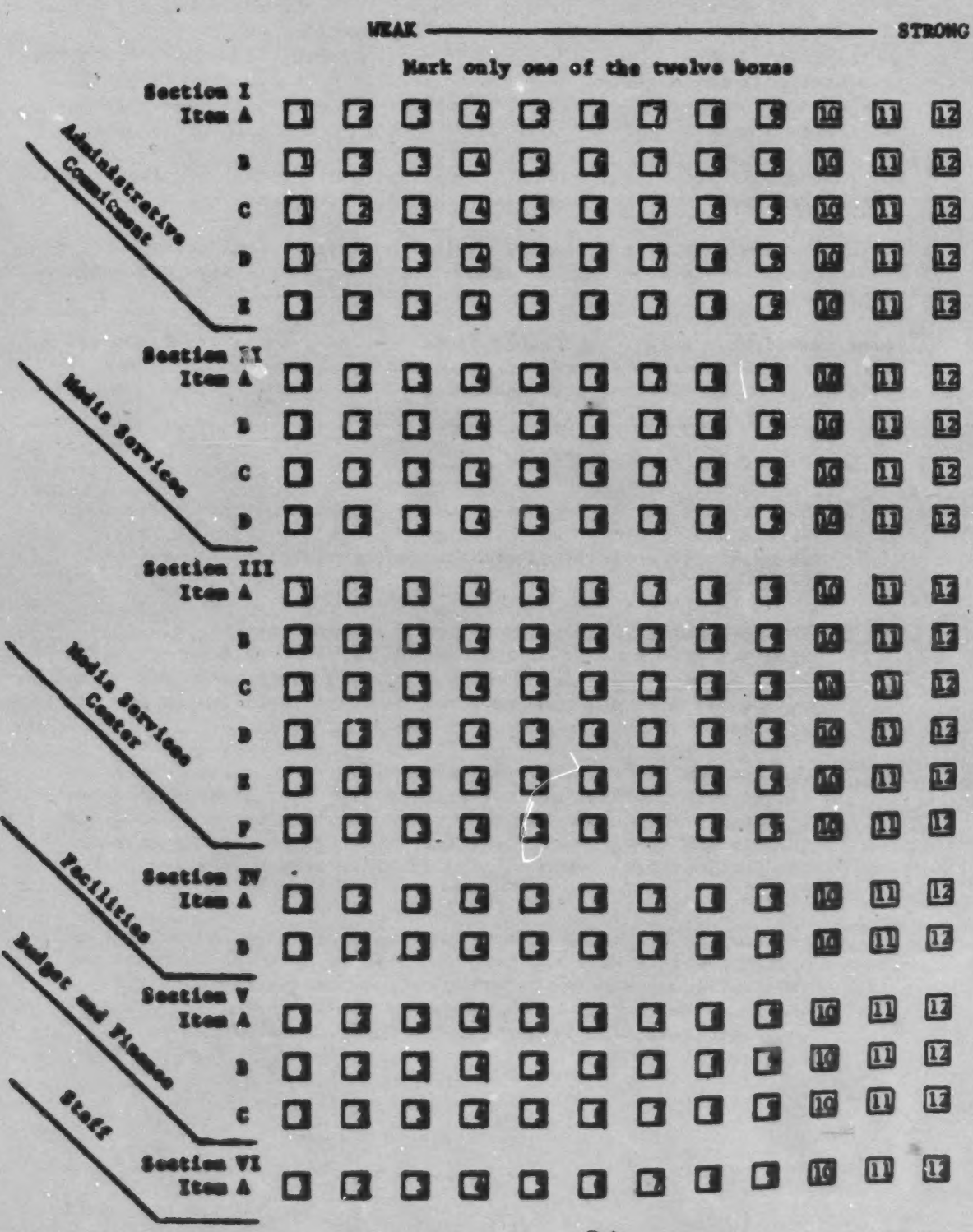
4 ☐ 5 ☐ 6 ☐ The institution's educational media program consists of media services from a media center managed by clerical and technical staff members. The services are not well coordinated and no one person has been given administrative responsibility for institution-wide media activities.

7 ☐ 8 ☐ 9 ☐ The institution's educational media program consists of a media center with clerical and technical staff. The program is directed by a staff person who has some media training but not enough to qualify him as an educational media specialist. He reports to the institutional administrator directly responsible for instruction.

10 ☐ 11 ☐ 12 ☐ The institution has an educational media program including a media center and necessary sub-centers directed by an educational media specialist who reports directly to the administrative officer in charge of instruction. He is provided with facilities, finances, and staff essential in meeting the media needs of the instructional program.

PROFILE SHEET

To develop a Profile image of your program, transfer your mark from each item of the Evaluative Checklist to this sheet. Connect the marked squares by straight lines. Then turn the sheet to a horizontal position. This will pictorially demonstrate the "peaks" and "valleys" of attainment for your program.



MEDIA PROGRAM BUDGET SUMMARY

Building _____

District _____

BUDGET (for media equipment, materials, personnel, and services)
Enter the correct figures in columns "a" and "b" of the chart below to show actual expenditures for the media program in the two years preceding the current year, and in column "c" to show the amounts budgeted for specific categories during the current year. Specify years in all three columns.

I. Item(s) of expenditure	2 years preceding current year 197__ -197_	1 year preceding current year 197__ -197_	Current year 197__ -197_
	a	b	c
A. Line item totals			
1. Library books & materials	$	$	$
2. Audiovisual materials			
3.* AV equipment (not replacement)			
4.* AV equipment (replacement)			
5. TOTAL of lines 1, 2, 3, & 4 above			
B. Per pupil expenditure for media program materials & equipment. Divide line 5 by the enrollment.			
C. Media Staff Salaries			

*Note: Include not only portable television equipment, but also centralized television installations.

II. Revenue (current year only)	
A. Total district budget	
1. State funding	$
2. Local funding	
3. Federal funding	
B. Media budget	
1. District	
2. Federal (identify)	
a.	
b.	
c.	
d.	
3. Other (PTA, etc.)	

Services: Selection Policy—II

[ ] A. An approved statement is on file which establishes procedures for handling challenges to materials on the basis of content.

[ ] B.

[ ] C. A policy statement has been drafted in general terms and does not yield itself to specific interpretation.

[ ] D.

[ ] E. No policy statement exists.

COMMENT:

Constraints to A (above) Capable proposals to meet A

1. Facilities--

2. Money--

3. People--

4. Policy--

5. Time--

Services: Reference

☐ **A. The media program provides the expertise in information retrieval service to staff and students in support of instructional objectives.**

☐ **B.**

☐ **C. Reference materials are available to staff and students for seeking out information but there is no service rendered to assist them in the compilation of information.**

☐ **D.**

☐ **E. There is no provision for reference service.**

COMMENT:

Constraints to A (above) **Capsule proposals to meet A**

1. **Facilities--**

2. **Money--**

3. **People--**

4. **Policy--**

5. **Time--**

Part 2.—Media Duty Profile

Instructions for use

Part 2 of this section is entitled the Media Duty Profile and is intended to indicate the involvement of media personnel in various assigned duties. The list of 30 tasks is only a sample. For additional items, see the note at the top of the following page.

If the media program being evaluated is served through a single professional person, use the letter "c" to signify that media specialist.

Example: 7. Instructs students in media skills. A B (C) D E F G H

Circle the letter or letters following each statement to identify the person(s) who perform each task as a major assignment at the school level. Underline clearly in red (or other color) to identify the person(s) who perform each task at the district level.

Example: 14. Produces graphic, photographic and audio instructional materials and displays. A B (C) D E F G H

Media Duty Profile

NOTE: The items below are illustrative only. Other or additional items may be used. Consult the Behavioral Requirements Analysis Checklist (ALA) and/or Jobs in Instructional Media Study (AECT) for items.

Media staffing references in these pages are as follows:

- A Director of district media program
- B Head of school media program
- C Media specialist

→ Certified

- D Media technician
- E Media aide and/or clerk
- F Student aide
- G Other
- H Not Performed

→ Noncertified support personnel

Please circle the letter or letters following each statement to identify the person(s) who perform each duty as a major assignment at the school level. Underline in red (or other color) the letter or letters following each statement to identify person(s) who perform each duty as a major assignment at the district level.

1. Confers with administrators and/or school board concerning media operation, programs and budgets. . . . . A B C D E F G H
2. Participates in curriculum development and revision . . . . . A B C D E F G H
3. Designs learning materials . . . . . A B C D E F G H
4. Helps to develop and implement proposals for federal projects, programs and service units . . . . . A B C D E F G H

Total Collection

	MATERIALS			EQUIPMENT		
a. Base collection in the school						
b. Basic recommendation—state or local (convert to represent actual school size)						
c. Need ("b" minus "a")						
d. Rating ("a" divided by "b") %						
e. 1975 AECT/AASL *Media Programs: District & School* recommendations	20,000 items located in the school or 40 items per user.			Shelving and/or cabinets to accommodate a minimum of 40 items per student, exclusive of textbooks.		
f. Need ("e" minus "a") to 1975 recommendations						
g. Acquisition plan to reach goal ("b" or "e" above)	19___	19___	19___	19___	19___	19___

Consider—

Community Consolidated School District 15
Palatine, Illinois

WORKING COPY

INSTRUCTIONAL RESOURCES DEPARTMENT MEDIA STANDARDS

1975-76 EXTENSION

1976-77 GOALS

School _____

Number of Pupils _____

Number of Teaching Stations _____

PRINT MATERIALS

Item	Recommended Standard	No. on Hand	Standard	No. to Order	Cost	Total
Books Budget #502.32000	5,000 titles per K-8 Resource Center, or, 12 titles per pupil--whichever is less (Multiple copies purchased under additional budget allotment)					
eference Sets	3-5 current sets (within 5 year publishing date) per K-8 Resource Center					g
Periodicals K-8 Student/Professional Budget #502.32290	15-20 K-8 including professional magazines for K-6					
Professional Magazines and books Budget #502.32300	K-8 allotment Specialized junior high in DaI budget					
Newspaper, K-8 Budget #502.32290	2 titles per K-6 Resource Center 3 titles per junior high Resource Center					

APPENDIX B

HYPOTHESIS:

There will be a significant difference between the number of books read by students prior to and following a book talk presented orally by the librarian.

Subjects were 30 students in a seventh grade reading class consisting of an equal number of boys and girls ranging in I. Q. from low to high. (See tables.)

BOOKTALK 29-JUL-76 PAGE 2

FILE NONAME (CREATION DATE = 29-JUL-76)

GROUP

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	30	100.0	100.0	100.0
	TOTAL	30	100.0	100.0	

Subjects = 30

(30 participants)

MEAN	1.000	STD ERR	0.000	MEDIAN	1.000
MODE	1.000	STD DEV	0.000	VARIANCE	0.000
RANGE	0.000	MINIMUM	1.000	MAXIMUM	1.000
VALID CASES	30	MISSING CASES	0		

62

BOOKTALK 29-JUL-76 PAGE 3

FILE NONAME (CREATION DATE = 29-JUL-76)

IQ

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
High I.Q.	1.	6	20.0	20.0	20.0
Average I.Q.	2.	15	50.0	50.0	70.0
Low I.Q.	3.	9	30.0	30.0	100.0
	TOTAL	30	100.0	100.0	

I.Q. range

MEAN	2.100	STD ERR	0.130	MEDIAN	2.100
MODE	2.000	STD DEV	0.712	VARIANCE	0.507
KURTOSIS	-1.028	SKEWNESS	-0.138	RANGE	2.000
MINIMUM	1.000	MAXIMUM	3.000		
VALID CASES	30	MISSING CASES	0		

71

70

FILE NONAME (CREATION DATE = 29-JUL-76)

SEX

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
Female	0.	15	50.0	50.0	50.0
Male	1.	15	50.0	50.0	100.0
	TOTAL	30	100.0	100.0	

MEAN	0.500	STD ERR	0.093	MEDIAN	0.500
MODE	0.000	STD DEV	0.509	VARIANCE	0.259
KURTOSIS	-2.036	SKEWNESS	0.000	RANGE	1.000
MINIMUM	0.000	MAXIMUM	1.000		

VALID CASES 30 MISSING CASES 0

Divided by sex of student

FILE NONAME (CREATION DATE = 29-JUL-76)

PRE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	0.	18	60.0	60.0	60.0
	1.	6	20.0	20.0	80.0
	2.	3	10.0	10.0	90.0
	10.	3	10.0	10.0	100.0
	TOTAL	30	100.0	100.0	

MEAN	1.800	STD ERR	0.586	MEDIAN	0.333
MODE	0.000	STD DEV	2.990	VARIANCE	8.938
KURTOSIS	4.119	SKEWNESS	2.399	RANGE	10.000
MINIMUM	0.000	MAXIMUM	10.000		

VALID CASES 30 MISSING CASES 0

Sixty percent read no book before treatment. Forty percent read or more books prior to treatment.

BOOKTALK 29-JUL-76 PAGE 6

FILE NONAME (CREATION DATE = 29-JUL-76)

POST

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	0.	6	20.0	20.0	20.0
	1.	9	30.0	30.0	50.0
	2.	3	10.0	10.0	60.0
	3.	6	20.0	20.0	80.0
	5.	3	10.0	10.0	90.0
	9.	3	10.0	10.0	100.0
	TOTAL	30	100.0	100.0	

MEAN	2.500	STD ERR	0.486	MEDIAN	1.500
MODE	1.000	STD DEV	2.662	VARIANCE	7.086
KURTOSIS	0.951	SKEWNESS	1.366	RANGE	9.000
MINIMUM	0.000	MAXIMUM	9.000		

VALID CASES

Twenty percent read no books before treatment.

Eighty percent read 100 more books after treatment.

64

BOOKTALK 29-JUL-76 PAGE 2

FILE NONAME (CREATION DATE = 29-JUL-76)

- - - -

BOOKTALK 29-JUL-76 PAGE 2

FILE NONAME (CREATION DATE = 29-JUL-76)

CROSSTABULATION OF IQ BY PRE PAGE 1 OF 1

IQ	PRE 0	1	2	10	ROW TOTAL
1	0	3	3	0	6
	0.0	50.0	50.0	0.0	20.0
	0.0	50.0	100.0	0.0	
	0.0	10.0	10.0	0.0	
2	12	0	0	3	15
	80.0	0.0	0.0	20.0	50.0
	66.7	0.0	0.0	100.0	
	40.0	0.0	0.0	10.0	
3	6	3	0	0	9
	66.7	33.3	0.0	0.0	30.0
	33.3	50.0	0.0	0.0	
	20.0	10.0	0.0	0.0	
COLUMN TOTAL	18 60.0	6 20.0	3 10.0	3 10.0	30 100.0

Average students read more than either lower or higher I.Q.

RAW CHI SQUARE = 26.16667 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0002
CRAMER'S V = 0.66332
CONTINGENCY COEFFICIENT = 0.68285
LAMBDA (ASYMMETRIC) = 0.40000 WITH IQ DEPENDENT, = 0.25000 WITH PRE DEPENDENT,
LAMBDA (SYMMETRIC) = 0.33333
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.49445 WITH IQ DEPENDENT, = 0.46755 WITH PRE DEPENDENT,
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.48063
KENDALL'S TAU B = 0.53352, SIGNIFICANCE = 0.0226
KENDALL'S TAU C = 0.56000, SIGNIFICANCE = 0.0226
GAMMA = 0.85455
SOMERS'S D (ASYMMETRIC) = 0.34483 WITH IQ DEPENDENT, = 0.32258 WITH PRE DEPENDENT,
SOMERS'S D (SYMMETRIC) = 0.33333
ETA = 0.56568 WITH IQ DEPENDENT, = 0.24611 WITH PRE DEPENDENT,

BOOKTALK 29-JUL-76 PAGE 3

FILE NONAME (CREATION DATE = 29-JUL-76)

CROSSTABULATION OF

IQ	POST 0	1	2	3	5	9	ROW TOTAL
1	0	3	0	0	3	0	6
	0.0	50.0	0.0	0.0	50.0	0.0	20.0
	0.0	33.3	0.0	0.0	100.0	0.0	
	0.0	10.0	0.0	0.0	10.0	0.0	
2	6	6	0	0	0	3	15
	40.0	40.0	0.0	0.0	0.0	20.0	50.0
	100.0	66.7	0.0	0.0	0.0	100.0	
	20.0	20.0	0.0	0.0	0.0	10.0	
3	0	0	3	6	0	0	9
	0.0	0.0	33.3	66.7	0.0	0.0	30.0
	0.0	0.0	100.0	100.0	0.0	0.0	
	0.0	0.0	10.0	20.0	0.0	0.0	
COLUMN TOTAL	6	9	3	6	3	3	30
	20.0	30.0	10.0	20.0	10.0	10.0	100.0

RAW CHI SQUARE = 46.00000 WITH 10 DEGREES OF FREEDOM, SIGNIFICANCE = 0.0000
CRAMER'S V = 0.87660
CONTINGENCY COEFFICIENT = 0.77709
LAMBDA (ASYMMETRIC) = 0.00000 WITH IQ DEPENDENT, = 0.28571 WITH POST DEPENDENT,
LAMBDA (SYMMETRIC) = 0.20000
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.81453 WITH IQ DEPENDENT, = 0.49459 WITH POST DEPENDENT,
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.61547
KENDALL'S TAU B = 0.16199, SIGNIFICANCE = 0.1837
KENDALL'S TAU C = 0.15000, SIGNIFICANCE = 0.1837
GAMMA = 0.17241
SOMERS'S D (ASYMMETRIC) = 0.12500WITH ,IQ DEPENDENT, = 0.16129WITH ,POST DEPENDENT,
SOMERS'S D (SYMMETRIC) = 0.14085
ETA = 0.92940 WITH IQ DEPENDENT, = 0.12282 WITH POST DEPENDENT,

Data reveal that students in the lower group increase the number of books read more than the other group.

FILE NONAME (CREATION DATE = 29-JUL-76)

CROSSTABULATION OF SEX BY PRE

SEX	PRE 0	1	2	10	ROW TOTAL
0	9	6	0	0	15

	40.0	40.0	0.0	0.0	50.0
	80.0	100.0	0.0	0.0	
	30.0	20.0	0.0	0.0	
1	9	0	3	3	15
	60.0	0.0	20.0	20.0	50.0
	50.0	0.0	100.0	100.0	
	30.0	0.0	10.0	10.0	
COLUMN TOTAL	18 40.0	6 20.0	3 10.0	3 10.0	30 100.0

RAW CHI SQUARE = 12.00000 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0074
CRAMER'S V = 0.63246
CONTINGENCY COEFFICIENT = 0.53452
LAMBDA (ASYMMETRIC) = 0.40000 WITH SEX DEPENDENT. = 0.00000 WITH PRE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.22222
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.40000 WITH SEX DEPENDENT. = 0.25662 WITH PRE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.31117
KENDALL'S TAU B = 0.16856. SIGNIFICANCE = 0.1982
KENDALL'S TAU C = 0.16000. SIGNIFICANCE = 0.1982
GAMMA = 0.29000
SOMERS'S D (ASYMMETRIC) = 0.13793 WITH SEX DEPENDENT. = 0.16000 WITH PRE DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.14815
ETA = 0.63246 WITH SEX DEPENDENT. = 0.36821 WITH PRE DEPENDENT.

BOOKTALK 29-JUL-76 PAGE 5

FILE NONAME (CREATION DATE = 29-JUL-76)

CROSSTABULATION OF SEX BY POST PAGE 1 OF 1

SEX	COUNT / ROW % / COL % / TOT %	POST 0	1	2	3	5	9	ROW TOTAL
0		0	9	3	3	0	0	15
		0.0	60.0	20.0	20.0	0.0	0.0	50.0
		0.0	100.0	100.0	50.0	0.0	0.0	
		0.0	30.0	10.0	10.0	0.0	0.0	
1		6	0	0	3	3	3	15
		40.0	0.0	0.0	20.0	20.0	20.0	50.0
		100.0	0.0	0.0	50.0	100.0	100.0	
		20.0	0.0	0.0	10.0	10.0	10.0	
COLUMN TOTAL		6 20.0	9 30.0	3 10.0	6 20.0	3 10.0	3 10.0	30 100.0

RAW CHI SQUARE = 24.00000 WITH 5 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0002
CRAMER'S V = 0.89443
CONTINGENCY COEFFICIENT = 0.66667

80

81

LAMBDA (SYMMETRIC) = 0.50000
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00000 WITH SEX DEPENDENT, = 0.28571 WITH POST DEPENDENT,
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.06425
KENDALL'S TAU B = 0.13040, SIGNIFICANCE = 0.2224
KENDALL'S TAU C = 0.16000, SIGNIFICANCE = 0.2224
GAMMA = 0.14667
SOMERS'S D (ASYMMETRIC) = 0.10000WITH ,SEX DEPENDENT, = 0.16000WITH ,POST DEPENDENT,
SOMERS'S D (SYMMETRIC) = 0.12308
ETA = 0.80483 WITH SEX DEPENDENT, = 0.34387 WITH POST DEPENDENT,

BOOKTALK 29-JUL-76 PAGE 6

FILE NONAME (CREATION DATE = 29-JUL-76)

CROSSTABULATION OF PRE BY POST PAGE 1 OF 1

PRE	COUNT / ROW % / COL % / TOT %	POST 0	1	2	3	5	9	ROW TOTAL
0		6	6	0	6	0	0	18
		33.3	33.3	0.0	33.3	0.0	0.0	60.0
		100.0	66.7	0.0	100.0	0.0	0.0	
		20.0	20.0	0.0	20.0	0.0	0.0	
1		0	3	3	0	0	0	6
		0.0	50.0	50.0	0.0	0.0	0.0	20.0
		0.0	33.3	100.0	0.0	0.0	0.0	
		0.0	10.0	10.0	0.0	0.0	0.0	
2		0	0	0	0	3	0	3
		0.0	0.0	0.0	0.0	100.0	0.0	10.0
		0.0	0.0	0.0	0.0	100.0	0.0	
		0.0	0.0	0.0	0.0	10.0	0.0	
10		0	0	0	0	0	3	3
		0.0	0.0	0.0	0.0	0.0	100.0	10.0
		0.0	0.0	0.0	0.0	0.0	100.0	
		0.0	0.0	0.0	0.0	0.0	10.0	
COLUMN TOTAL		6 20.0	9 30.0	3 10.0	6 20.0	3 10.0	3 10.0	30 100.0

RAW CHI SQUARE = 76.66667 WITH 15 DEGREES OF FREEDOM, SIGNIFICANCE = 0.0000
CRAMER'S V = 0.92906
CONTINGENCY COEFFICIENT P 0.68779
LAMBDA (ASYMMETRIC) = 0.75000 WITH PRE DEPENDENT, = 0.28571 WITH POST DEPENDENT,
LAMBDA (SYMMETRIC) = 0.45455
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.82464 WITH PRE DEPENDENT, = 0.52953 WITH POST DEPENDENT,
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.66493
KENDALL'S TAU B = 0.54786, SIGNIFICANCE = 0.0002

68

82

83

```
KENDALL'S TAU C =  0.58667.    SIGNIFICANCE =  0.0002
GAMMA =  0.70370
SOMERS'S D (ASYMMETRIC) =  0.47500WITH ,PRE      DEPENDENT,          =  0.65517WITH ,POST     DEPENDENT,
SOMERS'S D (SYMMETRIC) =  0.55072
ETA =  0.99613 WITH PRE      DEPENDENT,          =  0.92548 WITH POST     DEPENDENT,

BOOKTALK                                                                    29-JUL-76       PAGE   7

          DATA TRANSFORMATION DONE TO THIS POINT:

                # OF TRANSFORMATIONS                0
                # OF RECODE VALUES                  0
                # OF ARITHM. OR LOG. OPERATIONS     0

          THE AMOUNT OF TRANSPACE REQUIRED IS       0 WORDS

                    FINISH

END      USER: SMITREV [132437,322101]      JOB: JOBA80  SEG: 546     FINISHED: 29-JUL-76 16:25  PAGES: 8  SYSTEM: A          END
```

APPENDIX C

EVALUATION TECHNIQUES FOR SCHOOL LIBRARY/MEDIA PROGRAMS

A BIBLIOGRAPHY

Compiled by David V. Loertscher and Blanche Woolls for an institute conducted under a grant from the U.S. Office of Education, Title IIB, Higher Education Act of 1965, P.L. 89-329, as amended.

INSTRUMENTS

Association for Educational Communications and Technology, Committee on evaluation of Media Programs, *Evaluating Media Programs: District and School; A Method and an Instrument.* The Association, 1976.

> "This evaluation instrument is based on the assumption that *the purpose of evaluation is not to prove but to improve.* This instrument is intended for use as part of a formative evaluation process." Includes profile and budget, services, personnel, physical facilities, collection, and student and teacher opinionnaires.

Case, Robert, "Criteria of Excellence Checklist," *School Libraries* 18:43-46, Spring, 1969.

> "The 'Criteria of Excellence' was first used by the School Library Manpower Project, funded by the Knapp Foundation of North Carolina Inc., as a guide in identifying outstanding school library centers offering unified service programs at the building level." This checklist "will provide the foundation for an initial evaluation of individual school library programs."

DeProspo, Ernest R., and Samuels, Alan R., "A Program Planning and Evaluation Self Instructional Manual," unpublished paper, 1975.

> Designed as an "on-going effort in library/media program measurement and evaluation" this unfinished manual provides "strategy and tactics of program planning and evaluation . . . within the context of the school media center."

District and Regional Learning Resource (Media) Programs: A Systematic Planning Process and Exploratory Survey of Services: Final Report. Austin, Texas, Texas Education Agency, Division of Instructural Resources, 1975.

> James Liesener's technique of planning as applied to district and regional media programs. Plans are to publish this report, but it is not currently available.

Fulton, W. R. and King, Kenneth L., *Evaluative Checklist: An Instrument for Self-Evaluating an Educational Media Program in School Systems,* Washington, D.C., Association for Educational Communication and Technology, 1970, 13 pp.

"The status of an educational media program is not likely to be known without periodic evaluation." This checklist was developed to aid in such an evaluation and provides guidelines for making judgments on program elements.

Gaver, Mary Virginia, *Effectiveness of Centralized Library Service in Elementary Schools,* New Brunswick, N.J., Rutgers University Press, 1963, 268pp.

The evaluative instruments for this study were developed to assess the availability of library services in elementary schools in terms of materials provided, resources and services, library related activities, pupil mastery of library skills, and reading done by children. Educational achievement was measured as well as the ability to differentiate between schools with various degrees of libraries provided. Checklists used for this study are given in the Appendices.

Gaver, Mary, and Jones, Milbry L., "Secondary Library Services: a Search for Essentials," *Teachers College Record,* 68:200-210, December, 1966.

The checklist developed for this study was similar to the one used by Gaver in *Effectiveness of Centralized Library Service in Elementary Schools* as listed above this basic list of 110 services was developed through a survey of the literature on library work with young people.

Gaver, Mary Virginia, *Services of Secondary School Media Centers: Evaluation and Development,* Chicago, American Library Association, 1971, 131pp.

A report of a follow-up of a 1965 study which was done in 1969. Checklist of services lists the variety in number and kind of services and the balance in presentation of services in all the areas of the media center program.

Gaver, Mary V., *A Survey of the Educational Media Services of Calgary Public Schools conducted on behalf of the Calgary School Board,* Edmonton, Alberta, School of Library Science, University of Alberta, June, 1971, 137pp. mimeograph

This report of a survey of media services offered in Galgary contains a survey instrument.

Henne, Frances, Ersted, Ruth, Lohrer, Alice and others, *Planning Guide for the High School Library Program,* Chicago, American Library Association, 1951.

A questionnaire designed to evaluate the existing activities and services for students and teachers as well as the staff, materials collection, budget and facilities. Three classifications of responses were used: How good? (To measure worth or condition); To what extent? (To measure degree of frequency); and Yes or No? (To permit variations in answering). The final chapter discusses the development of a planning program for the school.

"An Instrument for the Qualitative Evaluation of Meida Programs in California," Sacramento, California, California State Department of Education, 1972, 37pp.

California's method of "assessing the adequacy of media programs throughout California."

Liesener, James W., *Planning Instruments for School Library Media Programs,* Student Supply Store, University of Maryland, College Park, Maryland 20742.

To be used with Liesener, listed below.

Liesener, James W., *A Systematic Planning Process for School Media Programs,* Chicago, American Library Association, 1976, 166pp.

"The process, techniques, and conceptual model . . . to conceptualize media programs more systematically and to develop more sophisticated management tools for improving the capability of media personnel to articulate and develop more responsive and effective programs of media services." Preface, p.v.

Loertscher, David Vickers, *Media Center Services to Teachers in Indiana Senior High Schools 1972-73.* Unpublished doctor's thesis, Bloominton, Indiana, Graduate Library School, Indiana University, 1973, 149pp.

Two scales are used for this checklist. The first evaluates how often the service is provided and the second rates how satisfactorily the service is provided.

Loertscher, David V. and Stroud, Janet G., *PSES: Purdue Self-Evaluation System for School Media Centers: Elementary Catalog* and *PSES: . . . Junior, Senior High School Catalog,* both Idaho Falls, Idaho, Hi Willow Research and Publishing, 1976, 24pp.

Catalogs of more than two hundred service statements which can be used to measure the awareness, frequency, and segment of the user group who are utilizing media center services.

National Study of School Evaluation, *Elementary School Evaluative Criteria,* Arlington, Virginia, The Committee, 1973, 152pp.

Criteria for evaluating the elementary school which includes the media center.

National Study of Secondary School Evaluation, *Evaluative Criteria for the Evaluation of Secondary Schools,* 4th ed., Washington, D.C., The Committee, 1969, 356pp.

Criteria developed for the evaluation of secondary schools and including the evaluation of the media center and services.

National Study of School Evaluation, *Junior High School/Middle School Evaluative Criteria: A Guide for School Improvement,* Arlington, Virginia, The Committee, 1970, 152pp.

Criteria for the junior high/middle school.

"The Nebraska Guide for Establishing, Developing, Evaluating, School Media Programs," Lincoln, Nebraska, Nebraska State Department of Education, 1975, var. pp.

Measurement of the success of instructional materials and accompanying equipment to meet the demands for both new and old approaches to education.

New Jersey, Department of Education, Public and School Library Services Bureau, "New Jersey Blueprint for School Media Programs," The Department, s.n., 13pp.

Definitions precede a checklist of staff, location and space, collection – materials, and equipment. Checklist designates a goal and space is left to record present achievement in the local school.

North Central Association of Colleges and Schools, Ad Hoc Committee on Instructional Technology, Commission on Research and Service, "Inventory of Policy and Program for Instructional Technology," The Association, 1975.

Designed for use in colleges, this booklet is organized into two parts: 1) Policy and Program Inventory for Instructional Technology and 2) Checklist of Specific Items Identifiable with Policy and Program. Basically uses yes/no and observed/not observed responses to questions.

Peterson, Frederick William, *The Development of Evaluative Criteria for the Services Provided Local School Districts by the Area Media Center,* Unpublished doctor's thesis, Lincoln, Nebraska, The Graduate College, University of Nebraska, 1969, 97pp.

"This study developed evaluative criteria for the activities of the area media center as these activities related to the local school district. Not only should these evaluative criteria provide administrators and media specialists with information of value in planning new activities for area media centers but should also provide a measuring device for the on-going evaluation of area media centers." pp. 3-4.

Phillips, LuOuida Vinson, "A Quick but not Easy Test to Determine How You're Doing as a School Librarian or Media Specialist," *Wilson Library Bulletin* 50:399-401, January, 1976.

A simple self evaluation instrument "designed to help you gain insight into you and how you see your job" -- very much a self analysis test.

Southern Association of Colleges and Schools, "Evaluating the Elementary Schools Library Program," The Association, 1964, 26pp.

Questions to be answered regarding overview, viewpoint, functions, programs, resources planning in workbook style.

RESEARCH DESIGN AND TECHNIQUES

Blazek, Ron, *Influencing Students Toward Media Center Use: An Experimental Investigation in Mathematics,* Chicago, American Library Association, 1975, 176pp.

As a report of an experimental doctoral research project, this work "is intended to aid individuals, school media specialists and teachers alike, determine for themselves the nature of their potential contribution in producing student users of school media centers and libraries." Preface, p.xv.

Bruning, James L., and Kintz, B.L., *Computational Handbook of Statistics,* Glenview, Ill., Scott, Foresman and Co., 1968, 269pp.

"Most statistics textbooks concentrate on theoretical discussions and mathematical proofs of the various concepts presented. The result of this approach is that students often have little understanding of how actually to apply statistical tests to their fundamental findings. The intent of this book is to reverse this approach and to present statistical concepts and tests *as they are applied."* From the Preface.

Campbell, Donald T., and Stanley, Julian C., *Experimental and Quasi-Experimental Designs for Research,* Chicago, Rand McNally, 1963, 81pp.

An examination of "the validity of 16 experimental designs against 12 common threats to valid inference."

Case, Robert and Lowrey, Anna Mary., *Behavioral Requirements Analysis Checklist: A Compilation of Competency Based Job Functions and Task Statements for School Library Media Personnel,* Chicago, American Library Association, 1973, 60pp.

"An identification of approximately 700 tasks to be performed by school library media specialists . . . to anticipate, and in some instances to conceptualize the functions and tasks of the school library media specialist to meet the present demands and future needs of school library media center users."

Chase, Clinton I., *Elementary Statistical Procedures,* 2nd ed., New York, McGraw-Hill Book Co., 1976, 277pp.

"The emphasis is on deriving procedures out of logical structures that underline the methods of analyzing data." Preface.

"Competencies for Specialists in Media Management," *Audiovisual Instruction* 19:30-44, November, 1974.

A representative sampling of tasks adapted from *Final Report: Jobs in Instructional Media Study* which can serve as an idea source for tasks which may need evaluation.

Encyclopedia of Educational Evaluation, San Francisco, Jossey-Bass, 1975, 500pp.

Short articles describing both main concepts and techniques of evaluation. A bibliography is appended to each article.

Guba, Egon G., and Stufflebeam, Daniel L., *Evaluation: The Process of Stimulating, Aiding and Abetting Insightful Action,* Monograph Series in Reading Education, Bloomington, Indiana, Indiana University, June, 1970, 35pp.

The authors do not believe "that evaluation is equivalent to research . . . many researches make wrong assumptions about what an evaluation study accomplishes. . . ." "The paper attempts to point out directions which other research methodologists can follow in advancing the theory and practice of educational evaluation."

Isaac, Stephen, *Handbook in Research and Evaluation: A Collection of Principles, Methods, and Strategies Useful in the Planning, Design and Evaluation of Studies in Education and the Behavioral Sciences,* San Diego, California, Robert R. Knapp, 1971, 186pp.

"The Handbook presents only highlights, outlines, and essentials to achieve emphasis, clarity, and brevity. Each user is expected to supplement this document with more complete information from the standard texts or qualified consultants in this field, once he has his bearings." p. iv.

Kerlinger, Fred N., *Foundations of Behavioral Research,* 2nd ed., New York, Holt, Rinehart and Winston, 1964, 741pp.

One of the most readable, yet authoritative, of all statistics textbooks.

Questionnaires for Research: An Annotated Bibliography on Design, Construction and Use. USDA Forest Research Paper PNW-140. Portland Oregon, Pacific Northwest Forest and Range Experiment Station, U.S. Department of Agriculture, 1972, 80pp.

For those doing mail questionnnaires, this publication summarizes studies which evaluated tcchniques for questionnaire construction and administration.

Seibert, Ivan N., *Educational Technolgy: A Handbook of Standard Terminology and a Guide for Recording and Reporting Information about Educational Technology,* Washington, D.C., U.S. Department of Health Education and Welfare, 1975, 276pp.

A section of definitions of evaluation terminology and guidelines for measurement of collection sizes are included in this handbook designed to help people gather, compile, and interpret data relating to the application of technology to instructor.

Shapiro, Peter D., "After Data Collection: Coding--An Educational Research Tool," Stanford, California, Stanford University, Institute for Communication Research, 1972, 10pp.

An analysis of ways and means to code "the research task that intervenes between data collection and analysis."

Sheldon, Brooke E., ed., *A Guide for Library Leaders, Staffs and Advisory Groups,* produced under a grant from the Bureau of Libraries and Learning Resources, U.S. Office of Education, 1973 reproduced and distributed by The Continuing Library Education Network and Exchange, Box 1228 620 Michigan Ave., NE, Washington, D.C. 20064.

An interpretation of "some current evaluation theory and translate it into a workable structure for practical application by training directors." p. 1.

Stenner, A. Jackson, *An Overview of Information Based Evaluation: A Design Procedure*, Arlington, Virginia, Institute for Development of Educational Auditing, 1972, 37pp.

An advanced approach to the design of information based evaluation. The authors also contrast evaluation with research. A flow chart describes the development of an evaluation design.

EVALUATION OF EDUCATIONAL RESEARCH

Gephart, William J., and Bartos, Bruce B., *Phi Delta Kappa Research Center Occasional Paper # 7 Profiling Instructional Package*, Phi Delta Kappa, August, 1969.

Through the use of a Research Profiling Flow Chart, this evaluation of educational research will depitct sound procedures and weak procedures. "Once the research user understands the strength of the procedures . . . he is in a better position to use the conclusions of that research in professional decisions.

Ainsworth, Len, "Objective measure of the impact of a library learning center," *School Libraries* 18:33-35, Winter, 1969.

Maedgen Elementary School in Lubbock, Texas. From individual room collections to centralized library -- "To increase pupil proficiency in the use of library." No Standardized test could be located -- school administrered a self-constructed multiple choice test. The control school -- adjacent elementary school in the same district. Reported significant improvement in the mean scores of students from pre-test to post-test indicating an improvement in library skill of participating students. No pre-test at control school.

Chisholm, Robert L., "How to Evaluate a Good Library and Program," *School Board Journal*, 24-25, 41, November, 1965.

Author points out objective measures and less than objective measures with emphasis on evaluation of personnel.

Graham, Mae, "Changing perspectives on program evaluation," *School Libraries*, 18:27-29, Fall, 1968.

We should not fear evaluation. Rather judge the impact the program is making. Determining impact will provide information necessary for decision making -- impact in terms of established goals and objectives. The objectives of school media program must be compatible with objectives of the school. Five pitfalls: 1) no effective instrument for a completely objective evaluation of any segment of education. 2) We undertake too much at one time. Evaluate only one aspect at a time. 3) Watch hazard of comparison, even if we have improved over yesterday, what impact has this degree of growth made. 4) We do not define our goals. 5) Us-we a passive, defensive, oversensitive, resistant to change. Evaluation if a creative, on-going, cooperative learning process, essential for both long and short range planning -- a basis for budget requests -- an action program because the results tell us directions to follow, what we need to get them, changes which need to be made -- areas to continued emphasis. No point in assessing impact unless we are willing to take the action which is indicated.

Hale, Irene W., "Influence of library services upon the academic achievement of twelfth grade students," *Wilson Library Bulletin*, 45:127, October, 1970.

Twelfth grade students -- 2 matched classes -- one got library resources in all varieties -- the other only incidentally -- 50 students -- grouped by achievement tests to get equal ability representation. Both achievement and library skill test at beginning -- at close. Research conducted through Advanced Study for Library Personnel, University of Kentucky, Athens. Measure effect upon the learning of students exposed to library skill and service.

"How Well Are You Doing Your Job? *Library Journal*, 83:3554, December 15, 1958.

School library supervisor must continuously evaluate the school library program. Suggests measuring against national, regional and/or state standards, conducting experimental and survey research. Also includes short questionnaire to be self-administrered concerning performance as a supervisor.

Hays, Margaret, "Evaluating School Library Services," *Library Trends*, 1:372-385, January, 1953.

Educational objectives of the school should be directed toward desired changes in the behavior of students: evaluation should provide measurement of the degree of effectiveness with which an educational institution -- or a component of it, e.g. the library -- achieves such objectives. Means designed for appraising school library performance are reviewed, i.e., ALA standards, state and regional accrediting association standards, *Evaluative Criteria* (Cooperative Study of Secondary School Standards), with Henne's *Planning Guide for a High School Library Program* considered the most useful tool then available. Calls attention to the Illinois Consensus Study Program.

Lewis, Colive D., "West Virginia Evaluates New School Libraries," *West Virginia Libraries* 14:1-31, September, 1961.

Reviews results of survey of West Virginia school libraries in 1960 which led to West Virginia's selection as one of the states to receive aid in implementing the 1960 *Standards for School Library Programs* (ALA).

Loertscher, David V. and Land, Phyllis, "An Empirical Study of Media Services in Indiana Elementary Schools," *School Media Quarterly*, 4:8-18, Fall 1975

A report of a study measuring perceptions of students, teachers and media staff concerning services received from the elementary media center.

Lowrey, Anna Mary, "Staffing Patterns and Education for Media Center Personnel: Relevant or Regressive?" *Library Trends*, 19:509-519, April, 1971.

Calls for a reform in library education and a redefinition of the library function in the light of increasing use of media. Task analysis is required to determine who is doing what, who *should* be doing what and should it be done at all. Recommends applying the systems approach to curriculum development in library schools. Curriculum needs to be revised so that graduates have competency in printed and audiovisual forms of communication and their accompanying technologies, and competency in human behavior, learning theory, management, planning, evaluation, and research. Programs for staff development are also essential.